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ABSTRACT

Summarized are 19 presentations given at the first annual National Conference on the Disadvantaged Gifted held March 24-25, 1973. Emphasized is the effect of identification procedures, program provisions, and research and evaluation on (1) economically deprived gifted students, (2) culturally different gifted students, (3) female gifted students, and (4) gifted students in rural communities. Provided are summaries of papers by the following persons: A. Arnold, A. Baldwin, J. Ballinger and D. Schrecengost, E. Bernal, C. Bruch, T. Epley, P. Farrell, E. Fitzgerald, J. Gallagher, J. Gowan, A. Hatch, D. Jackson, M. Meeker, B. Mitchell and E. Dodson, S. Moreno, J. Renzulli, I. Sato, D. Sisk, and C. Stallings. Part I, on identifying the disadvantaged gifted student, gives summaries on three topical areas: the characteristics of disadvantaged gifted students, specific suggestions for identification programs, and recent research on identifying the disadvantaged gifted student. Papers on two topical areas (administrative provisions for programs for the disadvantaged gifted and program adjustment for culturally different gifted) are summarized in Part II. Provided in Part III are summaries of programs for the disadvantaged gifted and insights into the issues surrounding evaluation models and their implementation. (PT)

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Presentations at

The First National Conference on the Disadvantaged Gifted

March 24-25, 1973 – Ventura, California

Edited by Ellen J. Fitzgerald
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INTRODUCTION

On March 24-25, 1973, the National/State Leadership Training Institute on the Gifted and the Talented, in cooperation with the Ventura County Superintendent of Schools and the Association of California School Administrators, sponsored the first annual National Conference on the Disadvantaged Gifted in Ventura, California. Presentations were made at the conference on the following topics:

a. Economically deprived gifted students
b. Culturally different gifted students
c. Female gifted students
d. Gifted students in rural communities.

In addition, emphasis was placed on identification procedures, program provisions, and research and evaluation as they affect each of the aforementioned special groups of gifted students.

In this publication, the presentations of nineteen speakers at the conference are summarized. Some presentations concentrated on a single topic while others covered two or several topics. To preserve continuity and progression in the order in which information is presented in this publication, multiple topic presentations have been divided and placed in sections under appropriate subject headings. We are hopeful that this will be a convenient arrangement for the reader while not diminishing in any way the valuable contributions of the presenters.

Each of the presentations was both valuable and interesting and the conference participants gained much from them. It is our hope in preparing this publication for wider distribution that others who were unable to attend the conference will also welcome the opportunity to explore in depth the vital topic of disadvantaged gifted children and youth.

Ellen J. Fitzgerald

ACKNOWLEDGEMENTS

It would be impossible to acknowledge all those who have contributed to this publication. To the numerous presenters across the country who shared their ideas and research at this conference, appreciation is hereby extended. Gratitude goes to the following individuals and organizations who unselfishly contributed to this publication:

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- Irving S. Sato (N/S-LTI-G/T) for general project coordination.

PAPERS PRESENTED AT THE NATIONAL CONFERENCE ON THE DISADVANTAGED GIFTED

1. Allyn Arnold
   Los Angeles Unified School District
   Los Angeles, California
   "A Research Project on Program Provisions"
2. Alexinia Baldwin
   State University of New York
   Albany, New York
   "Identifying the Disadvantaged"
3. Janet Ballinger and Diane Schrecengost
   Pleasant Valley Elementary School District
   Camarillo, California
   "What Teachers Can Do for Gifted in Small Schools"
4. Ernest M. Bernal
   Southwest Educational Development Laboratory
   Austin, Texas
   "Mexican American Perceptions of Child Giftedness in Three Texas Communities"
5. Catherine Bruch
   University of Georgia
   Athens, Georgia
   "Using the Creative Binet in the Identification Process"
6. Thelma Epley
   Los Angeles Unified School District
   Los Angeles, California
   "Elementary Programs for Disadvantaged Gifted"
7. Pat Farrell
   San Joaquin Elementary District
   Irvine, California
   "Teacher Involvement in Identification"
8. Ellen Fitzgerald
   Minneapolis, Minnesota
   "Gifted Female Students"
9. James J. Gallagher
   Frank Porter Graham Child Development Center
   University of North Carolina
   Chapel Hill, North Carolina
   "Hidden Talent and Its Education"
10. John Curtis Gowan
    California State University
    Northridge, California
    "The Education of Gifted Youth"
11. Albert Hatch
    Los Angeles Unified School District
    Los Angeles, California
    "HISC – Another Method of Identification"

12. David M. Jackson
Associate Director
ERIC Clearinghouse on Handicapped and Gifted
Arlington, Virginia
"Evaluation of Programs for the Disadvantaged Gifted"

13. Mary Meeker
Loyola University of Los Angeles
"Patterns of Giftedness in Black, Anglo, and Chicano Boys, Ages 4-5 and 7-9"

14. Bruce Mitchell and Edward Dodson
Eastern Washington State College
Cheney, Washington
"SPICE—Instructional Model for Gifted Minority Students"

15. Steven Moreno
California State University
San Diego, California
"Assessment – Its Effect on the Mexican American"

16. Joseph S. Renzulli
The University of Connecticut
Storrs, Connecticut
"Talented Potential in Minority Group Students"

17. Irving S. Sato
National/State Leadership Training Institute on the Gifted and the Talented
Los Angeles, California
"Introduction to the First Annual Conference on the Disadvantaged Gifted"

18. Dorothy Sisk
University of South Florida
Tampa, Florida
"Developing Teacher Mediators/Teacher Training for the Disadvantaged Gifted"

19. Clifford Stallings
United States International College
San Diego, California
"Gifted Disadvantaged Children"

PART ONE

IDENTIFYING THE DISADVANTAGED GIFTED STUDENT

The identification of disadvantaged gifted students presents many challenges to educators. However, proper methods are absolutely crucial to a successful program for such students. Hence, many of the presentations at the conference were concerned with identification. Their remarks are included here under three topical areas: the characteristics of disadvantaged gifted students which must be considered in the identification process, specific suggestions for identification programs, and summarizations of recent research in this field.

CHARATERISTICS OF DISADVANTAGED GIFTED STUDENTS

In examining the problems associated with identifying disadvantaged gifted students, the general characteristics of these students and the conditions which make standard identification procedures inadequate were widely discussed. Such conditions involve socializing pressures or other negative influences encountered by the students at an early age which mitigate against school achievement and success. A compendium of these remarks follows:

Renzulli

There can be little doubt that our nation's largest untapped source of human intelligence and creativity is to be found among the vast numbers of individuals in the lower socio-economic levels, particularly among the approximately 20 million Black Americans. It would be a monumental task to explore all of the causes that have contributed to our failure to discover, stimulate, and make the most efficient use of this neglected source of talent. Intensified efforts to overcome this failure are based in part on the simple realization that an invaluable natural resource is being wasted daily by a system of education that has shut its eyes and turned its back on the children of the poor. The by-products of this waste are evident in unprecedented urban turmoil, in unemployment and underemployment, in rising crime and deliquency rates, and most importantly, in the human despair that accompanies thwarted expression and creativity.

Although massive efforts have been directed toward overcoming the inadequacies of educational programing for the culturally disadvantaged, relatively little attention has been focused on those youngsters within the total population of disadvantaged youth who have unusually high potentials for learning and creativity. The numerous compensatory programs that deal mainly with remediation in the basic skill areas and preparation for entrance into the labor market generally have overlooked the talent potential that exists in lower socioeconomic and minority group youngsters. A number of persons have called attention to the dimensions of this untapped source of talent (Douglas, 1969; Torrance, 1968), and few would disagree that the time is long overdue for a systematic nationwide effort in talent retrieval.

What exactly are the dimensions of the talent potential among minority groups, and what will be the costs of further delay in providing opportunities for the expression of such potential? A large body of accumulated research clearly indicates that gifted and talented children can be found in all racial groups and at all of society's economic levels. Regarding racial and ethnic origin, Niles (1954) reported that many high IQ Black children can be found in Black communities. Studies by Jenkins (1948) and Witty and Jenkins (1934) indicated that race ***per se*** is not a limiting factor in intellectual development, that Black children with high IQ's come from a variety of backgrounds, and that educational achievement of highly able Black children resembles that of other gifted youngsters. In more recent years, the works of Hunt (1961), Bloom (1964), and others have called attention to the significant role that environment plays in intellectual development. The massive number of research studies summarized in these works

has crucial implications for the role that education can and should play in developing the high potential of youngsters from all races and social classes.

In addition to those studies concerned mainly with the older or more traditional definitions of giftedness (i.e., giftedness in terms of IQ), a rapidly expanding body of literature dealing with a broader conception of talent development has recognized that children from depressed areas, low income groups, and racial minorities probably represent our largest unmined source of creative talent (Passow, 1966; Torrance, 1968). The importance of identifying and developing creative talents at all levels of society has caused leading philosophers and educators to focus their attention on this problem. In an article entitled "Is America Neglecting Her Creative Minority?" Toynbee (1964) commented:

> To give a fair chance to potential creativity is a matter of life and death for any society. This is all-important, because the outstanding creative ability of a fairly small percentage of the population is mankind's ultimate asset, and the only one with which man alone has been endowed.

It cannot be denied that society stands to benefit from a systematic investment in the development of this vast source of untapped talent; yet major inequalities of opportunity are still evident in our schools. The inferiority of existing schools for low income and minority group children has been indicated clearly by studies which show that the longer children stay in these schools, the further behind they become in achievement and the wider the gap grows between what they should know and their actual level of performance (Coleman and others, 1966; Sexton, 1961). Average drops in measured intelligence of as much as 20 points have been recorded as Black children progress (or perhaps we should say regress) through grades (Passow, Goldberg, & Tannenbaum, 1967). Other studies dealing with delinquency, level of aspiration, self-concept, aggressiveness, alienation, and a host of other variables have revealed similarly ominous findings about the current state of the school situation for disadvantaged youngsters (Coleman et al., 1966; Mathis, 1969; Williams & Byars, 1968). Under circumstances such as these, even the most highly able and well motivated students from minority groups surely must lose faith in a system where the probability of nonsuccess is so high.

In spite of these grim statistics, there is a growing realization that a wealth of creative talent is lying unidentified and understimulated in schools that serve urban ghetto and rural poor youngsters. The decade of the 1960's may well be remembered as a period in our history when the education establishment began to pay serious attention to the detrimental effects which result from the inferior opportunities that exist for a large segment of our population. Books such as ***How Children Fail*** (Holt, 1966), ***Death at an Early Age*** (Kozol, 1967), ***Pygmalion in the Classroom*** (Rosenthal & Jacobson, 1968), and ***Crisis in the Classroom*** (Silberman, 1970) have literally shocked us into the reality of the situation. If we look upon the activities and pronouncements of the Sixties as the first step in a direct frontal attack upon the problem of educational equality, then the heightened interest of that decade certainly can be regarded with optimism. But our view should not be blurred by such optimism, for scattered attempts to "do something" for the culturally disadvantaged thus far represent little more than the proverbial drop in the bucket when compared to the great number of youngsters whose day-to-day school experience is nothing short of an educational and psychological disaster. If, on the other hand, the groundwork laid during the Sixties has not been a false start, then action to correct this crucial problem in our schools remains the challenge and the task before us.

The term *disadvantaged* or *culturally disadvantaged* can be viewed as still another variation on the theme of problem children, retarded children, slow learners, and underachievers. However, it is hoped that the current emphasis on the disadvantaged and particularly on the disadvantaged gifted will be more than just another euphemism. Hopefully, it indicates both a new statement of the problem that educators are facing and an approach that will examine possible causes. Such causes should suggest specific teaching strategies.

Three primary areas of concern for the teacher of the disadvantaged gifted seem to cluster around the following questions: (1) What are the social and psychological factors which account for deprivation disadvantages? (2) What factors in school experience contribute to educational development or retardation? (3) What is the future task of the school?

For teachers to work with disadvantaged students, there is a need for them to advance from mere recognition of difficulties to an understanding of the lives of these children. Educators have only recently begun to understand that the relationship between cultural background and school learning is neither simple nor well understood. The conditions of social, economic, and cultural deprivation produce many kinds of deficits.

We know that low socioeconomic class homes often have a limited educational tradition and consequently the children from these homes have little "know-how" about school and its expectations. Uneducated parents cannot help their children in academic content or teach them conduct expected in school. Finally, they cannot kindle in their children aspiration for continued education.

Some of the most serious deficiencies in the disadvantaged child occur in the area of cognitive functioning, language skills, and reading. These problems are evident from the first years of school. Studies concerning disadvantaged children indicate that they are often apt to manifest a variety of linguistic disabilities such as limited vocabularies and nonstandard grammar (Hunt, 1964). School records also indicate their incapacity in such cognitive processes as the ability to observe and state sequences of events, to perceive cause and effect relationships, or to group concrete phenomena into classes of phenomena.

Presumably, individual potential is evenly distributed among all groups of people. If there are differences among groups with respect to functioning intelligence, the causes must be environmental conditions which inhibit or fail to facilitate the conversion of potential into functioning intelligence.

Miner (1957) describes intellectual stimulation as a product of the interrelationship of three factors: individual potential, motivation, and environmental stimulation. Environmental stimulation involves motivation or selectivity in responding to the environment. Different individuals respond to different cues in the environment. The variations in responses are due in part to the individual's motivation and in part to the availability of adequate adult mediators who can help the child develop concepts with which to interpret his environment. A potentially rich environment may be functionally unstimulating and, conversely, a limited environment, if exploited to the fullest, may be stimulating. A variety of stimulations, combined with mediation, tends to sharpen the mental operations and to foster modifications in the conceptual structure.

Further suggestions regarding the nature of intelligence emerge from considering the theories of human development. Piaget (1950) and Hunt (1961) pointed out that intelligence is substantially influenced by environmental conditions. According to data from these sources, the full development of abstract intelligence depends on the abundance of experience with concrete operations: manipulating objects, processing concrete data, experimenting with

spatial and time relationships and with the transformation of sizes and shapes. Cognitive potential is developed to the degree that the transformation of concepts is mediated or helped along by adults.

The consequences of cognitive deficiencies in disadvantaged children are complicated by their patterns of motivation and attitudes. They often feel alienated, a situation induced by family climate and experiences combined with a debilitating low self-concept. They tend to question their own worth, to fear being challenged, and to exhibit a desire to cling to the familiar. They have many feelings of guilt and shame which make them wary and often may cause them to be labeled as hyperactive. They also are quick in their hostility, both orally and physically. Yet, conversely, they can also be unresponsive, apathetic and lack initiative.

These characteristics of the disadvantaged result in behavior that teachers sometimes have difficulty in understanding. Such behaviors are a negative attitude toward school, teachers, and achievement, a tendency to seek immediate gratification rather than long range goals, and the use of violence in resolving conflicts.

Achievement, which is often used as a means of making continued education possible, is relatively little understood by the disadvantaged. Grades, used as an incentive to learning, mean very little to the disadvantaged. School for the disadvantaged has become a place which makes endless baffling demands. For the teacher of the disadvantaged a "Why try?" attitude often develops.

Urban schools with a large proportion of disadvantaged students and, within that group, disadvantaged gifted must become more conducive to productive learning. The building of positive relationships between teachers and students is one means of building individual motivation to achieve.

Gowan

Giftedness is defined as placement in the top half of the ninth stanine, or the top two percent, or an IQ of over 130. The Stanford Binet intelligence test does not plumb an innate quality of the cognitive soul; it fallibly measures the criterion of future academic performance. The word ***disadvantaged*** ostensibly refers to poverty and low socioeconomic status in the family. Note there is a difference between the youth's own potential socioeconomic status and that of his family. The nature and extent of this difference (seen only in a land of opportunity like ours) is one of the most interesting and important psychological variables for the educator.

The scion of a Jewish or Oriental immigrant family may not be culturally disadvantaged even though his parents are poor. The alien cultural tradition may actually give advantage in terms of rich cultural background, and the rapid rise of many sons of immigrants to managerial and professional positions attests to the advantages of their heritage. It is customarily felt that Mexican American families are culturally disadvantaged, but consider recent Cuban emigrees. With the same language handicap, surely no group has made faster adjustment to American life. It is the same adjustment which the Anglo-Saxon Kentucky hillbillies have failed to make for three centuries. The problem is not so much an ethnic difficulty as one of socioeconomic class status. We will therefore define ***disadvantaged*** as "being reared by poor lower class native parents out of the cultural mainstream."

So we have now refined the issue to a discussion of upwardly mobile youth from a culture of lower class poverty out of the cultural mainstream, who nevertheless have test capacities for high future academic performance. This is a somewhat anomalous situation,

because one of the variables most closely associated with academic performance is socio-economic status. Whether one believes in Sheldon's "t" (Sheldon, 1949) or merely feels that the tests are biased in favor of status (which they are), the effect is very obvious. What we become interested in then are cases where there is marked discrepancy between the youth's potential status and the actual status of his parents. Those who feel that this is an elitist view should remember that high talent is always confined to a small percentage of the population; we cannot make everyone gifted any more than we can guarantee happiness for all. What we can do is to see that those who have potential are not debarred because of status.

While nothing may be done to change a child's ethnic background, a great deal may be done to improve his potential socioeconomic status. Indeed, some of us think that this has been the main business of the American school in actualizing the American dream.

What are disadvantaged gifted children like? There is not much concrete evidence here. Acting against the identification of high intelligence is a powerful factor, low socioeconomic status. The factor which sustains talent against the adverse effects of environment is almost always creative potential. Hence, most disadvantaged gifted children have very high creative potential. Another way of saying the same thing is that creativity tests offer another route for identifying disadvantaged talent besides the usual verbal IQ.

It will be worthwhile therefore to look at some of the personality factors of the highly creative individual. A study by Gowan and Bruch (1967) located the following personal factors among highly creative teachers: (1) energy, (2) courage, (3) mental health and absence of neurotic traits, (4) adaptive intelligence, and (5) originality and non-conformity as opposed to authoritarian tendency. These can easily fit the disadvantaged gifted child.

Cultural disadvantage operates on the bright child very much as does emotional disturbance. It tends to flatten out his peak performance and to make it inconsistent, keeping it below test potential. Motivational, nutritional, developmental, social, and cultural factors are probably all involved. Gifted disadvantaged children tend to have their effectiveness destroyed by alienation (Gowan, 1968b). This can take many forms. It is often an exaggeration of the alienation seen in advantaged gifted children with emotional problems. One of the most common of these is so much hostility or resentment toward authority that creative performance is blocked.

A good discussion of the characteristics of disadvantaged gifted may be found in Frierson's doctoral thesis which found significant differences between upper and lower socioeconomic status students in the Cleveland Major Work Program (Frierson, 1965). Gallagher credits Riessman (1962) with summarizing differences in learning style of the disadvantaged child as physical, not aural; content centered, not form centered; externally oriented, not introspective; problem centered, not abstract; inductive, not deductive; spatial, not temporal; slow and patient, not quick and facile. Bruch (1969) credits Torrance with the following list of strengths of the creative disadvantaged: high non-verbal fluency and originality, high creative productivity in small groups, adeptness in visual art expression (also noted by Rogers, 1968), high creativity in movement, dance, and physical activity, ability to be highly motivated by games, music, sports, humor, and concrete objects, and use of language rich in imagery. Bruch sees disadvantaged students as having differential strengths in certain areas of the Guilford Structure of Intellect, particularly in areas of figural strength (visual, auditory, and kinesthetic), in behavioral content areas (social intelligence), in divergent operations (creativity), and in product transformation. This would indicate that the divergent production of figural and behavioral transformations would be two ability cells in which the disadvantaged gifted may excel. Unfortunately, the behavioral and figural areas are not well researched, which results in few tests being available for them. Bruch points out that the disadvantaged youth has often been characterized as ingenious and resourceful in coping with the difficulties of slum life, and in sizing up social situations of danger or opportunity quickly.

Gallagher

When we talk about culturally different children and parents, we usually refer to those who do not fit into the dominant pattern of values or practices of the society and who have suffered economically as a result. If the values of the school favor the docile, task oriented, polite, verbal child who is adept at sensing adult needs and playing to them, then the culturally different child who may have a different life style, individual in its own way, may appear strange, stubborn, noncooperative, lazy, etc. What are the special problems of this group when compared with other gifted?

Early work by Frierson (1965) has suggested that there is a difference between gifted children coming from the middle and lower classes. The primary area of difference was found in interests and attitudes rather than in measures of physical abilities or personality tests. The lower class gifted child seemed more interested in action and competitive sports while the middle class gifted spent more time in reading as a recreation.

A similar study by Karnes, et al. (1965) found gifted children from lower class homes to have more tensions in their family. They performed substantially lower than their predicted achievement levels. Gallagher and Janzen (1965) found substantial interracial friendship choices in elementary classes for gifted children in a midwestern town, suggesting a less ingrained tendency to respond to stereotypes in gifted programs.

The potential loss of hidden talent from poor economic circumstances is particularly serious because of the importance of the need for responsible leadership to articulate the special needs of the often voiceless subgroups from which they come. It is of utmost importance that we identify the talent that lies disguised by poor dress, or dialect speech, or an attitude of suspicion rather than enthusiasm. Included in the group not having a currently favorable educational or social environment are not only members of various traditional minority groups, but a good case could be made that it also represents many gifted girls. There is direct and clear evidence that inhibiting forces in our society and schools have imposed a social role of passivity and discouragement of intellectual activity on gifted girl students as early as the elementary grades.

Fitzgerald

With the rise of the Women's Liberation Movement, educators have begun to reexamine their beliefs and attitudes toward female students. Whereas many girls do not suffer the effects of economic deprivation, they are, in a sense, disadvantaged by very powerful socializing forces related to sexual roles and achievement which often discourage girls from giving their fullest measure to the school effort.

Our society has allowed sexual stereotypes to dominate a significant portion of all human interactions. These stereotypes predetermine many attitudes which educators hold toward women and their education. We allow ourselves to fall back on the comfortable notion that all girl students are headed eventually for the role of housewife and mother, and such career direction that they may receive need only prepare them for that brief span of years between school and marriage. In a society also dominated by a desire to test, to predict, and to classify, the casual assumption that a full one-half of the population can be assigned to a single, somewhat narrowly defined role is simply not logical. Recent statistics from the United States Census of 1970 giving information about women in the labor force and numbers of families now headed by women render old assumptions about the place of women in society out of date.

Nevertheless, the old sexual stereotypes persist in many quarters. Most readers are by now familiar with the concept of cultural programming which conditions little girls to display so-called "feminine" qualities such as dependence, submissiveness, and interest in home-centered activities. At the same time they are discouraged from independence, directness, and self-assertion, as such qualities are considered "masculine." This conditioning begins in the nursery, propagated by parents socialized by the same values who believe that they are assisting their children in eventual adjustment by discouraging them from exhibiting any behavior considered more appropriate to the opposite sex. By a very early age the conditioning is apparent. Whether it is irreversible is unknown. Certainly while sexual role stereotypes continue to be reinforced by television, films, books, magazines, advertising, and even textbooks, such conditioning will remain nearly irreversible.

Although they are discouraged from independence, assertiveness, and exploration, girls tend to fare well in elementary school, as these qualities are not overly valued in those grades in any event. What is valued are the very qualities to which girls are socialized. Quiet behavior, conformity, and dependence serve them well. Girls also tend to appear at school better scrubbed, neater, and with better manners. While the largely female teaching staff in the elementary schools will smile tolerantly at the disheveled, less organized, more active boy students and make remarks about boys being boys, such tolerance is not reflected in the treatment boys receive in the classroom, nor in grades given on class work.

However, at the onset of puberty, the socializing pressures on both girls and boys change. Relating to the opposite sex and to peers assumes paramount importance in the lives of adolescents. As children turn from their home to peers for identification, conformity to the peer group's standards is demanded for acceptance. Included in these standards, as any parent knows, are rules about dress, pastimes, likes, dislikes, and behavior which will or will not be accepted by the group. Behavior considered appripriate to the opposite sex absolutely will not be tolerated by the peer group. Largely confused about sex and identity at this time in their lives, adolescents are not disposed to any further clouding of an already cloudy issue. Therefore, sex roles as generally defined by society, learned by the youngsters, are adopted and enforced.

In addition to changing socializing pressures placed on girls at about the time they enter junior high school, certain significant changes take place in the type of education which they receive. Those qualities of quiet behavior and lack of independence valued in grade school are not as highly valued in junior and senior high school. Emphasis is shifted away from the language arts, in which girls generally do well, to such other subjects as science, math, and social sciences. All students experience some difficulty in this transition. However, girls have been encouraged to adopt certain qualities and in grade school have been positively rewarded for them. Thus, the transition is especially difficult for many adolescent girls.

For the first time in their school careers, girls encounter a significant number of male teachers, many of whom tend to place less value on girls' classroom contributions, as do their fellow students. As a result, many girls begin to shy away from speaking out in class. Gallagher (1966) found substantial differences in classroom expressiveness between 86 gifted boys and 79 gifted girls in grades seven through ten. Using a classification system for cognitive performance based on Guilford's work, he recorded and analyzed five sessions of each of the ten classes studied.

> Significantly greater production was shown by boys on expression in cognitive memory, convergent thinking, divergent thinking, and evaluative thinking. Since similar differences were not obtained on written measures of these characteristics, it was concluded that these classroom differences may represent differences in perceived sex role behavior rather than differences in basic intellectual abilities.

The results of stresses placed on girls at about the time they enter junior high school are evidenced by Shaw and McCure's (1960) study of the onset of academic underachievement in able boys and girls. Whereas the boy underachievers displayed a consistent tendency to underachieve throughout their elementary and high school years, the girls displayed an entirely different pattern. All the girls started at generally high levels. A marked split occurred at grade seven when the underachieving girls fell away from the achievers who continued to maintain high grade levels. By grade ten the discrepancy between the grade averages of the achieving and non-achieving girls was very marked. The tables summarizing data of the study present a sad and graphic picture of what happens when girls get "the message." Fortunately, however, some did not get the message and continued to achieve. We need much more information on the causes of underachievement in girls and methods which may counteract the forces of socializing pressures on able girls.

In the identification process we often place the gifted girl in a double-bind. Matina Horner (1969) has studied this phenomenon and said,

> Consciously or unconsciously the girl equates intellectual achievement with loss of feminity. A bright woman is caught in a double-bind. In testing and other achievement-oriented situations she worries not only about failure, but also about success. If she fails, she is not living up to her own standards of performance; if she succeeds, she is not living up to societal expectations about the female role. For women, then, the desire to achieve is often contaminated by what I call the motive to avoid success. I define it as the fear that success will lead to negative consequences, such as unpopularity and loss of femininity.

What has been traced is a system of socialization which by the end of high school has closed the options for a large number of very able young women. This system is, of course, based on long-standing tradition and largely enforced by unconscious means. As a system for depriving our society of talent and contribution from a significant proportion of the population it could hardly be improved upon, even by conscious design and effort. As educators concerned with the fullest development of the potential of all students, we should view any measures which hasten the eradication of old prejudices and stereotypes as highly desirable.

SPECIFIC SUGGESTIONS FOR IDENTIFICATION

Given many of the problems mentioned in the preceding section, specific suggestions for identification procedures which will partially offset disadvantages are necessary. Several presenters discussed their experience with programs to identify the gifted among disadvantaged populations. A summary of their ideas follows:

Baldwin

In 1965 the Director of Special Education for the Birmingham Board of Education in Alabama held a conference with me in which he outlined the proposed development of a class for gifted Black students. This was to be the first class of this type for Black students and I was being asked to be the teacher, the examiner, the organizer, and the "parent pacifier." This of course was a mammoth job because the population of students classified as non-white represented 40% of the total school population of Birmingham and thus presented a selection problem (School Census, 1965). After much study, we selected a cluster of schools which would not be too far from the base school of the class and then

started the process of selection. These children were entering grade 5, and the plan was for them to be under my direct supervision until they completed grade 8. (This was the traditional method which had been used by white schools for approximately 30 years.) As a teacher for several years, I had been able by instinct to identify those students who were especially bright. This assessment was not based on the student's academic achievement but on many intangibles which I then found I had to verbalize and somehow quantify.

The first measure to be used for these students was a group test, the Otis Quick Score Intelligence Test, followed by the grade 4 level of the Stanford Achievement Test. We looked at the verbal scores from the Stanford Achievement Tests and decided that the first pool of children would be those with a verbal score rank of 4+. Those with a minus 4 verbal score rank but a 4+ quantitative score were also put into the pool of children. The accepted cut-off point on the IQ test for previous gifted class participants in the school district had been 130. The Slosson Intelligence Test (SIT), the Gray's Oral Reading Test, and the Stanford Binet were available for verification for the final group. My academic background in the use of IQ tests and my personal experiences with the many sociological factors affecting the lives of the prospective students of this class made me defensive about the required 130 cut-off point. Another important psychological variable plagued me as I faced what I knew would be a frustrating task. I hated the idea of having to lower the standard for this class because it simply put a "notch" in the belt of those who collect supportive data which point to deficiencies in an already maligned group of people. How could I in good conscience work with these two variables: (1) criterion measures which were highly verbal, or group tests all having been standardized on a population which was not representative of the entire school population in America, and (2) a psychological variable which was based on an awareness that a lowering of the acceptance scores served as a further acceptance of inferiority. Yet if the acceptance scores were not lowered, exceptionally bright students who had not been exposed to books and magazines at home, had had starved verbal encounters all of their lives, had not been inspired to "get ready" for this test, and had had an external rather than internal locus of control would be overlooked. This would, without doubt, have eliminated the poorer children and made way for acceptance only of children from middle class Black homes. As the selection task proceeded, various methods of selection were used and the identification process gradually and subtly became a prescriptive device rather than a selective device. The final 25 students had IQ scores as assessed by the Slosson Intelligence Test which ranged from 115 to 187. Two boys in the class had a Slosson score of 187 and a Binet of 165+. The median score in the class was 124. Without exception, those students who scored at the highest level were highest in verbal skills. They came from homes where reading materials were always available and the parents of these children were professional people. Those students who were lowest in their IQ scores possessed other measurable as well as intangible and hard-to-measure traits. These traits coupled with test scores indicated high potential. Some of these traits were: high mathematical abilities, creativity (as evidenced by artistic and musical talent as well as divergent thinking), alertness, curiosity, and leadership ability. Teacher recommendations were taken into consideration and judged in relation to other evidence. The identification process continued for the duration of the experimental class. The prescriptive aspect of the identification process came into focus during the initial year of the class when instructional development focused on enlarging intellectual processes in areas of tested weaknesses. When comparative academic achievement measures were used at the end of the first year, it was found that these students were achieving at the same level as those in classes of gifted students in the white schools. The Hawthorne effect was operating and caused a great and expected spurt for the first year, but this spurt held during subsequent years.

It is interesting to note here that the ratio of boys to girls in the class was 7-18. This ratio in itself points out an ironic biological or cultural inconsistency which is shown by a willingness to accept and nurture superiority in girls in the early years of growth and an unwillingness to accept and reward excellence in these same girls as they enter adulthood.

A sequel to this case study could be an accounting of present achievements of these students. Some have successfully entered prep school in New England and one student is being considered for a three-year baccalaureate program at a northeastern university. I have no figures on their present achievement or IQ scores but I plan a follow-up study on them next year. Perhaps some of these students would have channeled their native abilities into areas of extended intellectual growth without this discovery and recognition of ability, but the statistical data on school dropout and underachievers attest to the fact that too much talent is needlessly lost to society. It has been estimated that in the United States in this decade, approximately 10% of the projected 7.5 million dropouts, or roughly 750,000, will have IQ scores within the top 25 percent of the population (Douglas, 1969). The largest percentage of dropouts will be those who are disadvantaged, and conceivably some of the students in this class could have been part of these statistics. The problem of identification of the disadvantaged talented requires concerned and considered research concentration.

Bernal*

In sponsoring a research project to explore new means of identifying native Spanish-speaking Mexican American children of school entry age, HEW officially broadened the recognized domain of bright youngsters to include culturally and linguistically different children. They are not easily, or even validly, screened into this category by traditional testing methods or by alternate techniques derived pragmatically from the extensive literature on the subject.

But an exhaustive review of the writing in the field will turn up several important and, I believe, not unrelated findings: (1) the "standard" definitions of giftedness have a great range and exhibit considerable arbitrariness; (2) there are few previous studies of gifted minority children; and (3) there are no published studies on gifted Mexican Americans. In fact, until very recent times the so-called gifted movement has had a prep school mentality. Giftedness and social opportunity were closely intertwined, and giftedness was narrowly delimited to that realm of endeavor almost classically intellectual. Supporting constructs such as ***talented*** were meant to account for the rest of the unusually alert or accomplished segment of society. It is not surprising, then, that ***gifted*** has only recently been recognized as a word properly attached to collective nouns such as ***Black*** or ***Chicano,*** and that broadly based techniques are generally lacking. These pioneer efforts at identification can be credited largely to Bruch (1972) and Stallings (1972), though other notables in the field have contributed to their successes.

The study of gifted Mexican American children in Texas is multidisciplinary in method, utilizing principally anthropological, sociological, and psychological techniques to try to discover not only gifted subjects for the study but also community views of gifted behavior and behavioral leads for identification among the young. The spirit of this research, however, is decidedly anthropological, to borrow a word from Kenneth Benne, in that staff

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*Grant awarded by the Office of Gifted and Talented, USOE. The opinions herein expressed are the sole responsibility of the author and no inference about official governmental intent or sanction should be made.

expertise is not presumed to be more important than community consensus. The project will hopefully yield a new way of identifying Mexican children (subject to validation in subsequent research) and document the place of gifted behavior in the Chicano culture. A better understanding of giftedness in other ethnic communities, including the Anglo society (see Magary and Freehill, 1972), may well be in order if we are ever to make sense of the interpersonal and social phenomena which attend the status and education of our best minds.

The study was conducted in the barrios of three Texas metropolitan areas selected because of their diverse ethnic composition and different societal functions in terms of the immigration-acculturation pattern. All of the informants were bilingual residents of these barrios, they ranged in age from early teens to retirement, and in socioeconomic status from lower class to upper middle class professionals. The questionnaire was pilot-tested and revised according to the version which seemed to elicit the most fluency in the respondents, and could be administered in English, Spanish, or both, as deemed most appropriate.

The investigation considered both gifted and talented constructs. Responses to each were gathered and classified and contradictory responses were resolved according to frequency. Only unambiguous results were considered in defining the two categories, and are the only ones reported here. Finally, the two categories themselves were compared and some of the more interesting anecdotal notes were sifted out.

Mexican Americans in general do not functionally differentiate between giftedness and talent except in the rather specific instances of the performing arts. This may be due in no small part to the limited expression of talent which children five to eight years of age can command. Chicanos regard the ***Raza*** itself to be talented as a whole in various modes of artistic and rhythmic expression, and most interviewees were quick to point out that recognizing and nurturing the "special gifts" of individuals is part of the interpersonal ethic of the culture and best carried out without much ado in the supportive ambience of the family.

Gifted Mexican American children are thought to be unusually mature and responsible for their age. They seek actively to learn how to become involved in more mature roles and are great imitators and elaborators of adult behavior.

These children are regarded to be leaders, both the dynamic-expressive ***(muy listos)*** and the quiet but influential types. Their suggestions are valued by their peers, and they are frequently called upon to mediate disputes with facts or judgment, plan strategy, and the like.

Gifted Chicano children are quick to grasp and anxious to try out new ideas, be they practical or theoretical. They seek out appropriate intellectual company among children or adults. Ideas may be joyfully fantasized or pursued with alacrity, but they are not laid aside.

In fact, one of the more salient characteristics seems to be the ability to initiate and maintain meaningful transactions with adults. The emphasis given by our informants seemed to be that the child could capture the adult's genuine interest. Later, once the child would be out of earshot, the adult might comment to the child's parents about their boy's or girl's being ***muy inteligente*** and adult-like in certain ways.

The other trait which strikes the parents and siblings of gifted Chicano youngsters is the facility with which they acquire English. This is not to say that they merely expand their lexicon but actually internalize the structure of the language very quickly. In several instances the child is thought to have acquired it passively from language models provided on television. Other children, particularly those with older brothers and sisters in school who speak English to each other at home, acquire this second language quite early or almost simultaneously with Spanish.

A summary of the anecdotal data would suggest that the gifted Chicano child is not treated with special deference (since that might spoil the child) but is recognized and provided

for, especially in the family setting. A number of parents expressed concern for the future of their children, since they do not possess the financial means to finance a college degree. Perhaps a special family counseling plan should be effected for parents of lower class gifted Chicano children.

In many ways these findings are not surprising. However, several characteristics, especially the bilingual and transactional skills of Chicano children, may prove valuable in designing alternative identification techniques for them at the time they enter school or shortly thereafter. These instruments should incorporate the use of multiple informants and convergence of judgments in the manner proposed by Mercer (1971), and should supplement, not replace, extant selection practices.

This set of identification techniques may tap different aspects of giftedness than those ordinarily accounted for. Giftedness has been studied since the inception of the project from a decidedly Chicano perspective. Guilford (1972) speaks of the diversity of intellectual talent, and has identified various factors in his structure of intellect model in foreign populations. This study, though not an extension of his approach, may help raise the issue that certain intellectual factors may be more profitably explored in some populations than in others, and that an ethnocentric view of talent or giftedness is both presumptuous and scientifically myopic.

The identification and cultivation of the finest minds in our society is particularly important for minority populations. In the past, gifted Chicanos and Blacks have too often floundered, remained undereducated or unacculturated to the point where they have been effectively lost to the parent population. Certainly if minority populations are to help shape their own destinies, then their own gifted and talented must participate actively in this renewal. The schools must develop what Ramirez (1972) has called "culturally democratic learning environments" to nurture these minds so that they can flourish without being alienated from their respective groups.

Thus, the initial efforts to study culturally different gifted children have many implications not only for the gifted movement directly but also for the education which the new diversity of gifted children will require.

Moreno

Gifted educational programs for the Mexican American population have been a myth. While 3.1% of the general population in California is identified for gifted programs, only .61% of the Chicano population has been so identified. By excluding the Mexican American from these gifted programs, talented youngsters have not been given the enriched education needed to develop their intellectual potential.

While only 4,461 Chicanos in California (1971) were identified as gifted, there should have been 22,482 so identified if 3.1% of the total Chicano population were properly identified.

The Chicano population is not being properly identified because its linguistic background interferes with accurate measurement on English IQ tests. Some reasons why the Chicano child has not been identified at the same rate as the general populations are as follows: It is common knowledge that the language spoken in the home has the greatest effect on the child's measured IQ. Recent studies show that at least one half of the Chicano school population comes from homes where Spanish is spoken to some degree, therefore making the children bilingual. Children from bilingual homes do not score as well on English IQ tests, because English IQ tests are heavily weighted verbally and they do not measure children's Spanish-speaking skills. The average IQ in bilingual communities may be as low as 85, with a standard deviation of 10, therefore placing tremendous odds against the identification of gifted children, since

school districts usually place great emphasis on IQ test scores.

Research shows that bilingual Chicano children score about the same on English or Spanish versions of achievement tests. The use of Spanish tests with bilingual children can be more harmful than beneficial because their Spanish is not as developed as would be expected for native Spanish speakers in Spanish-speaking countries.

There is a direct relationship between the language spoken by the child and achievement test scores. The more Spanish a child speaks, the lower his achievement test scores. In consideration of the above data, I am recommending the following program for the identification of mentally gifted Chicano children:

CRITERIA FOR SELECTION
(Identification during Grades PK - 3, whenever possible)

I. Selection of the top 3% of the Chicano students in EACH school as measured by:
   - A. Grade point average (ability to learn)
   - B. Teacher evaluation (knowledge of student's ability to learn)
     1. Reasoning
     2. Psychomotor development
     3. Affective responses
     4. Social effectiveness
     5. Diligence
     6. Problem solving ability
     7. School leadership
     8. Motivation
     9. Creativeness
     10. Self-confidence
     11. Competitiveness
   - C. Achievement test scores
     1. Reading
     2. Math
     3. Language Arts

II. Selection by a school committee comprised of:
   - A. School principal
   - B. Teachers of student—past and present
   - C. Local community representatives
   - D. A school psychologist familiar with the student and the school (optional)
   - E. A school nurse familiar with the student's developmental history
   - F. (Only the school principal, present teacher, and community aide will vote for admission)

III. Classes for gifted children

Each school with at least 15 students at each level (primary, intermediate, secondary) should have a class or cluster group. The class would follow the normal state criteria for enrichment offerings with special emphasis on local needs and interests.

IV. Local design of gifted classes to develop:
   - A. Local leadership and talent
   - B. Parent involvement in programs for gifted children
   - C. Programs at local levels to help other teachers

Meeker

Black, Chicano, and Anglo disadvantaged boys were tested on the Binet for patterns of intellectual abilities as defined in the Meeker Structure of Intellect (SOI) Analysis of the Binet. Each ethnic group was subdivided into two groups: one at age 4.9-5.9, who had no preschool experience so that there was no contamination due to formal education, and a second group at age 7-10, who had been in school four years.

One question concerned changes in their entering intellectual abilities as compared with school experience changes, if any. A second question concerned group strengths or weaknesses. This latter has special interest for programming or to remediate weaknesses which affect school achievement. These data are part of a much larger study requested by Dr. Beeman Phillips and Dr. Tom Oakland for the *Journal of School Psychology*. Indications of high and low abilities where they are significant within groups are presented herein. For a complete description of the study using normally distributed IQ scores, please see the December, 1973 issue of the *Journal of School Psychology*.

DISADVANTAGED GIFTED CHICANO STUDENTS

Cognition (comprehension with meaning and tracking) They come to school significantly capable in handling all figural input and most semantic material. They need to be strengthened in cognizing semantic relations and transformations since these abilities tend to be low and stay low. Specific material needs to be used toward this purpose in an individualized program.

Memory Memory for words and ideas tends to be low and does not get developed during school years. They make significant gains in memory for symbols and numerical concepts and in rote memory for digits, which is concentration.

Evaluation (foresight, judgment, and planning) They enter with high figural abilities and maintain these strengths; they lose out in evaluation of semantic relations, systems, and transformations. These abilities tend to be associated with leadership and, when lacking, tend to be associated with acting out or delinquent behavior.

Divergent Production (creativity) As a group they tend to be low and make minimal gains. This is particularly significant since these abilities tend to be correlated with good self-concept.

Convergent Production (the school block of abilities) They make their greatest gains here and come to school already high in the figural abilities. This is maintained, except at the implications level, which begins low and is not strengthened over the years by school work experience.

DISADVANTAGED GIFTED BLACK STUDENTS

Memory Although the young Blacks come to school low at the units level, they do not remain low, and in memory for words and ideas maintain the entering strength. Relations appear to be low and remain low although progress is made in arithmetic. They are high at the systems and implications levels. Programs should include more units training in memory and concentration on relationships in memory.

Cognition Generally the gifted are high in and retain their strengths in cognition skills with the exception of transformations of figural thinking. Since this is a common task in the DAT and other adult tests, specific training should be instituted in CFT as no progress is made due to schooling.

Evaluation Gains are made in evaluation of word relationships, but other semantic items are weak to begin with and remain weak.

Divergent Production Black students are the highest scorers of the three groups. Implications, relations, and units in words are low and remain low, but systems thinking is high.

Convergent Production Figural thinking here is high and remains high. Their ability to do convergent thinking is generally weak and needs strengthening since this is the school-learning set of abilities and needs special work if they are to maintain achievement commensurate with their abilities. These are also the typical tasks involved in scholastic tests preparatory to college entrance.

DISADVANTAGED GIFTED WHITE STUDENTS

Cognition Like the other boys they come to school high in figural thinking and maintain it. The cultural bias in the test is reflected in their preparation for school which, except at the transformations and implications levels, is strong. Later they become weak.

Memory On the whole low, except for the symbolic implications. The poor whites in general do not have a set to remember when they come to school nor is it strengthened except at the units in semantics level. Comparing cognition and memory, they are capable and do cognize and track especially in semantics, but their poor memory evidences lack of expectations to remember. It would be imperative to train memory in these boys because we find poor memory regardless of the adequacy of the general molar IQ index.

Evaluation Figural evaluations are good. Semantic evaluation is not generally good except for transformation.

Divergent Production This is a weak area for them, except for implications.

Convergent Production This is the highest of the three groups and indicates they will perform convergent tasks better than the other groups. It is difficult to explain the weakness in memory by other than its causes in the poverty of environment. What they learn in school is reproduced as learned, however.

CONCLUSION

The patterns shown here for disadvantaged children with high IQ scores serve as general indicators of the need for strengthened school curricula to develop certain intellectual skills. However, in each case, the individual profile must act as the main indicator for an individualized curriculum. This is particularly the case if a district claims money for identifying these students as gifted and wants a program which will allow for accountability.

It is apparent that schools in general do not improve the intellectual strengths which the boys bring to school. In some cases the strengths are lessened. That is partly because schools do not, as yet, teach to develop thinking skills in children. The outside-school environment contributes neither to the development of the skills nor to the enhancement of self-concept and self-confidence.

SUMMARY

The need for basing curriculum upon a model such as Guilford's which allows for individualization according to unique intellectual profiles is obvious. This demands a whole new curriculum, philosophy of curriculum, and teacher training approach. We can no longer expect that teaching

reading, writing, and arithmetic will teach children how to think, how to comprehend, how to remember, and how to be creative in problem solving.

Bruch

PRO-CULTURAL MEASUREMENT: The Use of the Abbreviated Binet for the Disadvantaged (ABDA)

1. The instrument was based upon normative data collected (Kennedy, 1963) in Southeastern states on 1800 Black children, grades 1 - 6. It is therefore most applicable to similar children, primarily from segregated areas or a poverty environment.
2. The instrument is an adaptation of the Stanford Binet (L-M) based upon the selection of the four items at each test level passed most successfully by the sample.
3. Preliminary studies (N over 100) indicate that re-scoring existing protocols of Black children in Georgia results in an average gain in IQ of 5 points over the regular Binet IQ, and 6 points over the "starred items" abbreviated Binet IQ.
4. Analysis of the data according to the Structure of the Intellect profiling using Mary Meeker's method reveals specific strengths upon which elementary Black students can be identified as gifted. They will be outstanding in the particular cognitive areas indicated as cultural "cognitive powers." These strengths and recommended test batteries and observations based upon these findings follow. An additional hypothesized area of strength would be that of behavioral or social intelligence. Evidences of peer group leadership and special qualities of empathy or understanding of others should also be observed although tests in these areas are relatively nonexistent.
5. A newly-designed profile method for charting the ABDA strengths has been introduced for experimental use. Comparisons of strengths are noted that are well beyond MA and/or CA as indices of giftedness or potential for such development.
6. The analysis of the cognitive patterns which may be found in other culturally different populations and similar identification processes has been suggested for use with normative samples from such groups.
7. Curriculum could be based upon such analyses of cognitive patterns, and experimental efforts will be made using the ABDA data in Georgia.
8. Cooperating psychologists and educators are being sought for validation of these efforts, and for collection of data from successful Black adults and high school students on the "Life Experience Inventory."

Structure of Intellect strengths of Black disadvantaged children on the Stanford Binet:

1. Visual and auditory figural content
2. Memory operations
3. Convergent production operations
4. Units and classes products (except semantic)
5. Systems products.

Recommended battery of tests to be included in identification of gifted Black children (a culturally biased battery for Blacks):

1. Visual space relations tests
2. Memory items on various tests of ability and achievement
3. Tests in musical form

4. Logical reasoning or problem solving tests
5. Tests involving all but verbal single units; tests requiring classification, particularly in space relations
6. Items requiring understanding of the integrated "whole" or the total system primarily of a space relations nature.

Observations of strengths as a means for identification of gifted Black children would include strengths in:

1. Art and music
2. Spontaneous recall, extensive listing from memory
3. Complex problem-solving in practical daily activities
4. Awareness of details in descriptions, fluency of ideas, spontaneous categorizations
5. Visual synthesis in complex drawings; multiple musical or kinesthetic (dance or athletics) perceptions of the whole organized system.

Figural fluency and figural creativity should also be tested and observed. The Stanford Binet has no items reflecting this particular set of strengths of Black children. The figural version of the Torrance Tests of Creative Thinking should be included in the battery of recommended tests above.

Hatch

Background: High scores on standard intelligence tests have been the traditional way to select mentally gifted minors. These tests are all cognitive measures which call for reproductive or convergent types of thinking. The assessment of other intellectual abilities has been encouraged to widen the concept of giftedness. Professionals in the field have long emphasized the strong role creativity can play as a factor in determining giftedness. Not all gifted are creative, but those with this quality show it by their divergent thinking. Thus, an assessment of divergent thinking can give indications of creative ability, which in turn can manifest giftedness.

The need for a simple way to assess creative potential through divergent thinking was the basis for this instrument. J. P. Guilford (1968) set forth six factors of creativity and these have formed the framework upon which the HISC was constructed. These factors are:

Sensitivity to problems - Persons who recognize problems usually are most apt to work on them. When they do, they usually find solutions.

Fluency - Persons who produce related ideas rapidly have a greater chance of having significant ideas.

Flexibility - Persons with greater spontaneity and adaptiveness have the ability to approach a problem with nonrelated shifting perceptions. They provide more alternatives to solve problems.

Originality - Persons who provide rare responses of merit have an advantage in creative output.

Elaboration - Persons who can build on a given stimulus and enhance it with further insights and productivity produce ideas.

Redefinition - Persons with the ability to transform a given stimuli into something else evidence creative production.

Gowan

The identification, stimulation, or exploitation of exotic factors of intellect, specifically those not usually identified in intelligence tests, has received considerable impetus from followers of Guilford. Meeker (1969) devised ways of weighting Stanford-Binet items for creativity and other structure of intellect factors, and Bruch (1968) reported a method of getting a "creativity quotient" from the famous test. Gallagher (1968) characterized the disadvantaged gifted child as a visual rather than an auditory learner, and noted his dependence on concrete rather than abstract experiences. Miller (1964) reported a talent search in the Pittsburg slum schools which found 2.6% of children in five Black schools had IQ's over 116. Rogers (1968), after a Bridgeport study, felt that the superiority he found among disadvantaged gifted students in visual art skills represents an area which can be exploited. Torrance (1964b) listed a number of non-test indicators of talent for the disadvantaged. He cited evidence that children in the 110-125 IQ bracket may score high on creativity tests, and believed that even lower IQ scores may yield creatives among the disadvantaged. He also suggested that one can observe which children have the least need for guidance when planning an activity. They can anticipate a correct solution when reporting their inner feelings and are aware of complex issues. They take a hopeful rather than a defeatist attitude, come up with the most ideas in a brainstorming session, and have the courage to lead and to stand on their ideas. As better and newer tests are developed for the exotic factors of the intellect we will have better methods of identification and hopefully will find more able disadvantaged children.

Farrell

The involvement of teachers in the identification of culturally disadvantaged gifted learners in the Santa Ana Unified School District has added an exciting new dimension to recognizing and involving talented disadvantaged learners in the gifted program. Following legislative amendments concerning identification of gifted pupils in 1969, new dimensions for qualifications were outlined and new techniques for identification were encouraged.

A pilot program serving three elementary schools, in grades K-6, was initiated in 1972 with the total commitment of six teachers who were anxious to identify gifted and talented learners as early in their educational development as possible. These teachers were involved in many discussions about the culturally disadvantaged gifted and the common characteristics of those children. These efforts were then developed into a screening instrument, listing characteristics that were often observed in the classroom, on the playground, and in the community. Some of these characteristics include:

1. Outstanding ability in math
2. Venturesome, anxious to do new things
3. Readily makes money on various projects or activities
4. Is an entrepreneur
5. Resourceful, able to solve problems by ingenious methods
6. Tells very imaginative stories
7. Has mature sense of humor (puns, associations, etc.)
8. Can show relationships among apparently unrelated ideas.

The teachers discussed those characteristics with the staff at each of the pilot schools to increase awareness of unique traits of potentially gifted learners. Screening was carried out in the three schools.

Following the initial screening, the teachers met with the district psychologist, auxiliary support staff members, and the speech therapist to coordinate the identification process. Although each candidate was also screened in a non-verbal testing situation to gather additional information, teacher input in the final selection was judged carefully. A thorough case study was completed on each student qualified for the program.

A parent advisory committee was established and teachers met with them to discuss interests of the children and to maintain open communication with the home. Finally the teachers, with parental input, developed a program that emphasized oral communication, language development, and a positive self concept.

The pilot program in the Santa Ana Unified School District met with success because of the total involvement and commitment of teachers who were dedicated to searching out and identifying the culturally disadvantaged gifted.

Stalling:

What is needed at this time are some alternative methods for the discovery and cultivation of the talents that we know exist among children whose experiences have been limited to an eight to ten block radius in an urban community.

Watson, in the forward of Reissman's book, ***The Culturally Deprived Child,*** brings us to the heart of this paper when he states:

> In the current flurry of concern over the gifted, most well-to-do families are pleased to think of their own children as being given well deserved special consideration. Teachers are gratified because higher standards are in vogue. Yet, the great reservoir of undiscovered and undeveloped intellectual talent in America is not in the upper-class or upper middle-class neighborhoods. While the proportion of high IQ's may be lower in underprivileged areas, the actual number of intellectually very bright children in poor homes is far in excess of those to be found in the relatively few homes of business and professional leaders.

Our simply knowing that this talent exists is not sufficient; I am concerned that we continue to waste talented young people who could provide badly needed leadership in our urban communities and within this country. Who are these children? How do we identify them? How can I, in a real world situation in which I have thirty to thirty-five physically active young people, light at least one candle? To these questions I have no absolute answers but some alternatives.

For so many years, the gifted child has been identified strictly by cognitive methods of evaluation. Terman's studies are an example of a very narrow concept of giftedness in which the primary goal was to measure within the realm of occupational hierarchy. If you were fortunate enough to be high on the professional scale, you were labeled successful. Other contributors to the field in recent years such as Robert Havighurst (1961) have developed other definitions of giftedness that lend flexibility to an already over-defined term. In this paper Havighurst's definition will be used:

> We shall consider any child gifted who is superior in some ability that can make him an outstanding contributor to the welfare of and quality of living in society.

Havighurst's definition shall apply in the remainder of this paper with a few exceptions. The term ***first order gifted*** shall apply to the extremely gifted child, or the student in the upper one percent of his class. The other children in the upper ten percent in a given ability

will be considered ***second order gifted.*** It must be remembered that we are now dealing with the top ten percent of the class.

The student who happens to fall in the one percent category in any community whether urban or suburban is not hard to spot. He will stand out like a new coin. In a disadvantaged school he will more than likely excel in traditional as well as environmental methods of testing. He will be able to discern differences and recognize similarities better than his peers, synthesize and generalize better, or he may have outstanding ability in music, mathematics, or art. He may be gifted at moving a group toward a worthy goal and possess leadership.

The second order gifted children may be less easy to recognize in an urban disadvantaged school, especially in using traditional methods of testing. The parameters of the classroom may also be too confining to produce some very creative and challenging moments for this population.

The term gifted will be used to identify those students who, through traditional as well as environmental testing, score well above the average on cognitive, affective, and psychomotor tests. Students who demonstrate a single talent in one specialized area shall be designated ***talented.*** Students who do not fall within the upper ten percent of their respective classes and who demonstrate exceptional ability in applied performance shall be designated ***high potential.*** This topic will be developed further in the techniques and procedures section of this paper.

Screening of students from limited educational backgrounds is not a task that can be taken lightly. Traditional methods of testing may be highly predictable in surfacing first order gifted students but teachers may find themselves confused in attempting to evaluate second order gifted students with traditional methods of testing. Teachers who screen urban children with traditional methods of testing and who find themselves quoting scores that do not measure up to traditional levels of giftedness are asked to read much of the present research on the subject, such as Allison Davis, ***Social Class Influence Upon Learning;*** A. Harrard, ***Social Status and Intelligence;*** and Ralph W. Tyler, ***Can Intelligence Tests be Used to Predict Educability?***

Measurement of urban disadvantaged students with traditional methods of testing by the classroom teacher should be done with a very well defined understanding of the parameters and limitations that this method of testing brings to the classroom. From Hartford to San Diego, I have listened to teachers ask why we have to allow these tests to be given. They do not believe the test scores include experiences the children bring to the testing situation. However, federal program guidelines specify that in order to be funded, or re-funded, we must show test scores.

Holding children responsible for tests that are not standardized or sensitive to the needs of urban students of limited educational background is wrong. To continue testing to satisfy federal guidelines is to justify testing for the wrong reasons, which is criminal.

It is suggested that traditional as well as "teacher-developed" methods of evaluating urban disadvantaged students be developed as screening instruments. Teachers are encouraged to develop environmental methods of testing as screening instruments. Environmental or culture-specific testing utilizes the radius of the child's community as contents for a screening instrument. Street signs within an eight to ten block radius of the school measure recall. Other creative methods can be developed by the classroom teacher.

For the evaluation of higher levels of learning, no child can manipulate objects or words if his vocabulary is limited or he lacks certain basic skills. Often urban children will find themselves caught between double meanings within the same word. Such words as ***together*** or ***cool*** in an urban community will have a completely different set of meanings than traditional definitions of the same term. Analogies can also be very frustrating to a youngster who may relate to terms in physical definitions instead of the process of cognitively manipulating the items. Teachers and psychometrists who develop items within the radius of the community in their screening process do not compel the students to spend fifty percent of their time

unravelling a world of words to which they have not been exposed and to which they cannot be expected to be exposed in the future.

Environmental testing *can* be accomplished by the teacher or a para-professional. Often the para-professional knows the community and can bring a teacher many items from within it that can be used to make up the contents of the environmental test. Teachers concerned about how to structure such a test can borrow the structure of traditional tests using environmental content. In standardizing such an instrument the urban teacher or psychometrist should use the instrument only to rank each individual classroom. Teachers should make no attempt at this time to generalize or interpret their classroom results with any other group. In an unpublished dissertation (Stallings, 1970) a first attempt was made to standardize an environmental testing instrument. Urban students in Hartford, Connecticut were tested on an instrument in which the contents of the test were derived directly from the radius of the urban child's community. Street signs, churches, barbershops, store fronts, etc., were used to measure recall. A second community in San Diego, California is now being field tested to determine if it is possible to develop an instrument especially for students from limited urban backgrounds in which the contents of the exam are taken directly from the child's immediate community. It is hoped that a school psychometrist will be able in the near future to isolate those items in an urban community that have a high rate of recurrence. The important task is to free the child from exposure to items with which he has had no experience, and to allow him to concentrate on the task of recall or manipulation of familiar items.

Teachers are asked to use the two methods just discussed as well as traditional methods. My methods, environmental testing, teacher observation, and peer evaluation gathered by class feedback in the form of a sociogram, are useful ways of identifying gifted children. These procedures are recommended in making final evaluations as to student eligibility.

In evaluating each classroom, classify students as to the definitions given earlier. No two classroom scores should be compared. Each classroom is to be ranked only against itself. Assuming the school groups classes homogeneously, students in the top one percent located by this method of screening should be labeled first order gifted. The next nine percent may be considered second order gifted. Those students demonstrating high potential and who score below ten percent in one specialized area may be labeled talented. As many teachers know, the real sleeper may not surface but will later demonstrate exceptional ability in physically applied performance. This is the most difficult individual for teachers or screening methods to identify. Unfortunately, we have more labels for this individual than answers i.e., aggressive, slow, remedial, overactive. Often the best evaluation of this youngster is later found to be inaccurate.

The one consistent criterion teachers may use in identifying gifted students is the depth to which students are able to respond to environmental items. Students asked to recall street signs or types of automobiles found on the block, when allowed to move deeper into the subject, will often show exceptional ability in giving details about things that happened on that street. The number of responses to an item should be considered important in evaluating student performance. Students should receive strong approval for recalling a street name. But, students who can list any number of details that relate to a certain item are to be considered very able in their capacity to remember information. For evaluating higher levels of thinking, teachers are encouraged to use the contents of the community in evaluating students' cognitive or intellectual abilities. No student can manipulate or generate abstract reasoning without the proper information to begin the task. Allowing students to work with familiar or meaningful materials will enhance the gifted student's ability in abstract reasoning. The above ideas will give teachers effective tools in identifying gifted children.

Gallagher

One of the more confusing and fruitless searches available in the field of educational measurement has been the search for a culture-free intelligence test which would avoid the cultural biases of the usual IQ test. It should be recognized that the assumption made is that intelligence may be mislaid but not destroyed. The latest attempts in this direction have been summarized by Karp and Sigel (1965). Most of these efforts have centered on attempts to find tests on which students from culturally different circumstances or from lower social classes do as well as their more advantaged colleagues. One can have compassion for this psychological sleight-of-hand attempt to bring fairness to an unfair world.

The hard facts are that unfavorable environment and circumstances do not provide the linguistic development necessary for success in a complex culture which by its very nature is built around verbal and linguistic systems. Such talent suppressed is not easily regained. The embarrassing question, not easily handled by those interested in culture-free tests, is as follows: even if it were possible to construct such an instrument, what would we do with it once we had it? Surely such a test will not predict educational success when that success depends on the very verbal development that has been carefully excised from the test.

SUMMARY OF RECENT RESEARCH ON THE IDENTIFICATION OF THE DISADVANTAGED GIFTED

Renzulli

A number of psychologists and educators who have wrestled with the problem of defining human abilities have advanced the thesis that a variety of talents contribute to the accomplishments of man. Early definitions of giftedness based solely on measures of intelligence have largely ignored the existence of a much broader spectrum of highly valuable human characteristics. In view of the heavy cultural loading of most standardized tests of intelligence and achievement, it is apparent that an identification process that depends mainly on traditional measures of performance will discriminate against youngsters who have not participated fully in the dominant culture. Attempts to circumvent this problem through the construction of culture-free or culture-fair intelligence tests have failed to yield measures that neutralize the influence of important factors in mental growth, such as perceptual and linguistic deprivation, the repression of constructive play activities, family insecurity, limited adult role models, and the effects of inferior school experiences. Thus, it seems safe to conclude that both traditional and so-called culture-free tests have had the effect of creating a limited conception of the abilities which our society values. Both reflect the emphasis which the dominant culture and formal education place on the ability to deal effectively with language, symbols, and abstraction.

In recent years a growing number of theorists and researchers have provided us with a much broadened conception of the nature of human abilities. Foremost among the newer models is the well-known Structure of Intellect cube developed by Guilford (1967) and his associates. This model consists of a three dimensional classification system designed to encompass and organize 120 possible talents according to (a) the type of mental operation employed, (b) the content involved in the thinking process, and (c) the type of product which results from the act of thinking. Williams and Eberle (1967) developed a similar model which identified 23 classroom teaching strategies that can be used to develop seven productive thinking operations in various subject matter areas, while Taylor's (1968) multiple talent model isolated an additional set of distinguishable abilities in areas such as creativity, decision making, planning, forecasting, and communications.

Taylor (1968) suggested a grouping of talents based on the world-of-work needs and pointed out that if we limit ourselves solely to academic talent, only the top 10 percent will fall into the highly gifted class and only 50 percent of our students will have a chance to be above average (i.e., above the median). On the other hand, if we measure students across several different talents, the percent of highly gifted students will increase tremendously:

> When we arrange a group of students on each of several talent ladders, those at the bottom of the old academic talent ladder—those heretofore labeled "educationally deprived"—will rise as a subgroup to be almost average as far as each of the other five types of talents are concerned. A third or more of them are likely to be above average on each new talent ladder. Since we have not been reaching these students, we should try eliciting as many different talents as possible. If we succeed, then those who had not been flourishing in the old talent area will discover some areas where they are promising individuals and perhaps even star performers.

Thus, the application of a multiple talent approach in our schools will result in greater numbers of students achieving higher degrees of success both in and out of school. According to Taylor, a natural by-product of this approach will be an increase in the student's individuality. Each student will experience and display his own unique profile across talents and will thus become more self-directed.

The taxonomies developed by Bloom (1956) and Krathwohl, Bloom, and Masia (1964) provide another classification system for isolating cognitive and affective processes that clearly identify dimensions of man's repertoire of behaviors. These behaviors often are not measured by traditional tests of intelligence or are buried in the general scores which many of these tests yield. A good example is the limited range of abilities sampled by the Scholastic Aptitude Tests (SAT). According to a recent report by the Commission on Tests (1970), the SAT has been found to be mainly a measure of developed verbal, mathematical, and reasoning abilities, and thus it fails to take account of the educational potential of college applicants who for one reason or another have been educationally disadvantaged. The Commission has recognized the need for a broader conception of college admission criteria and has suggested that the SAT be expanded to include measures of the following abilities:

1. Adaptation in new learning situations
2. Problem solving in situations that require varied cognitive styles and skills
3. Analysis, search, and synthesis behaviors
4. Information management, processing, and utilization skills
5. Nonstandard information pools
6. Comprehension through experiencing, listening, and looking, as well as reading
7. Expression through artistic, oral, nonverbal, and graphic as well as written symbolization
8. Characteristics of temperament
9. Sources of status of motivation
10. Habits of work and task involvement under varying conditions of demand.

The Commission further suggested that test procedures should be redesigned (a) to broaden the varieties of subject matter, competencies, and skills assessed; (b) to examine achievement in a variety of contexts; (c) to make greater use of open-ended and unstructured indicators of achievement; and (d) to assess non-academic achievement such as social competence, coping skills, avocational skills, and artistic, athletic, political, and mechanical skills.

With these and other models to assist in defining and classifying a variety of human abilities, the next step should consist of the selection or development of appropriate instruments to identify a broad range of talent potential. Bruch (1971) suggested using Guilford's model to diagnose different patterns of abilities reflected in existing test items and to specify factors and clusters of factors that represent the strengths and weaknesses of particular individuals or cultural groups. Tests then could be designed to fit cultural strengths, and such tests could be used to measure both conventional abilities and those talents which are valued most by an individual's own culture. Bruch further suggested a case study battery for the identification of gifted disadvantaged youngsters that would include a profile of their strengths and developmental needs, ratios of time in school to developmental levels and achievement levels, and an analysis of positive and negative factors (both sociocultural and personal) which either enhance or inhibit further development of talents.

Additional strategies for identifying hidden talent among the disadvantaged have been developed by Torrance (1969a). Through the use of instruments such as the Torrance Tests of Creative Thinking (Torrance, 1966), youngsters are given an opportunity to respond in terms unique to their own culture. Such an approach avoids the problem of evaluating the child through experiences that are common to the dominant culture, and at the same time helps to create a psychologically safe atmosphere which will motivate him to put forth his greatest effort. On the basis of research studies carried out with disadvantaged groups, Torrance (1964c, 1967) has identified the following set of creative characteristics which he found to occur with relatively high frequency among disadvantaged children:

1. High nonverbal fluency and originality
2. High creative productivity in small groups
3. Adeptness in visual art activities
4. High creativity in movement, dance, and other physical activities
5. Ability to be highly motivated by games, music, sports, humor, and concrete objects
6. Language rich in imagery.

Research conducted by Torrance and his associates over a period of 12 years has led to the conclusion that children of economically deprived and minority cultures seem to perform as well as those from any other group. In a recent review of the literature dealing with the use of the Torrance Tests of Creative Thinking, Torrance (1971) summarized the results of 15 research studies which focused on the creative abilities of low socioeconomic and minority group children. Generally these studies indicated that although whites surpassed blacks on verbal measures, there were no significant differences on scores of figural fluency, flexibility, and originality, and in some cases the so-called disadvantaged groups surpassed the middle class groups. Although measures of intelligence have been found consistently to correlate positively with socioeconomic status, the research summarized by Torrance seems to indicate that creativity bears little relationship to factors such as race, social class, and level of parental education. Thus a convincing argument is presented for a relatively culture-free method of identifying a bountiful supply of creative talent. Torrance (1971) expressed the belief that in many ways the life experiences of low socioeconomic youngsters may actually be more supportive of creative achievement than the experiences of more advantaged children.

> Their lack of expensive toys and play materials contributes to their skill in improvising with common materials. The large families and life styles of disadvantaged families develop skills in group activities and problem solving. Positive values placed by their families on music, rhythm, dance, body expressiveness, and humor keep alive abilities and sensibilities that tend to perish in more advantaged families.

The recently developed Alpha Biographical Inventory (Institute for Behavioral Research in Creativity, 1968) provides another strategy for identifying creative talent among disadvantaged and minority group youngsters. This instrument, consisting of 300 items through which an individual is asked to describe himself and his background, is based on the belief that past behavior, experiences, and self-descriptions can be used as indicators of future performance. A number of research studies carried out by the developers of the Alpha indicate that it can be used as an aid in identifying a number of different talents which are important for both academic performance and performance in a variety of work situations. The significance of this instrument lies in the fact that creativity scores and scores on a number of other factors bear little or no relationship to race. In other words, for certain abilities the Alpha does not discriminate against persons from racial minorities.

The Subcultural Indices of Academic Potential (SCIAP, Grant & Renzulli, 1971) is another instrument designed to take account of problems of test bias, the cultural distinctiveness of minority group members, and the growing concern on the part of high schools and colleges to identify high potential minority group students for supportive educational programs. The instrument consists of 145 items which ask students to indicate how they feel about themselves and how they would react in situations that are common to their everyday experiences. There are no right or wrong answers to the SCIAP items; rather, the instrument yields a profile that points out student preferences and learning styles in areas such as the organization and management of information, commitment to social responsibility and leadership, flexibility in social situations, originality in cultural context, initiative and persistence, self-concept, attitudes toward education, and support of family and school toward continuing education.

Two additional considerations should be pointed out in discussing the issue of identification. First, one of the major characteristics of the disadvantaged is their failure to master the linguistic and grammatical structures of the dominant culture. For this reason it is necessary to develop identification strategies which are not language dependent. Furthermore, because most youngsters have a greater facility with the spoken rather than the written word, it is especially important that the disadvantaged child not be required to write down all of his responses. Tape recorders can serve in uncovering higher forms of thinking which might otherwise go undetected because of limited writing ability.

Finally, the identification of talent potential among the disadvantaged should be a continuous process that begins in the early years and is carried out with unusual frequency. Until more and better predictive instruments are available, talent searches should take place in the classroom on a regular basis. Because of the dynamic nature of abilities such as creativity, efforts to make long range predictions should be replaced with frequent assessments of a variety of talents. These assessments should be followed by carefully designed classroom activities which are constructed specifically to enhance those talents which have been identified.

Baldwin

In the past decade volumes of material have been written on the sociological and cultural reasons why disadvantaged children score poorly on standardized IQ tests. We're in general agreement that these sociological and cultural factors defy the usual measurement techniques and consequently render us unable to assess quantitatively the intellectual functioning of a student termed disadvantaged.

When the term ***identifying*** is used in educational circles, an instant response word is usually the word ***testing.*** This is ironic when, in fact, in an era of research and technology, tests can be considered a reinforcement of an obsolete way of evaluating human talent. Many

programs for gifted children still use traditional intelligence and achievement tests for identification procedures. However, it is commonly known that many programs for gifted children use non-test methods as well as tests of creativity for identification purposes.

The title of an interview article in a recent issue of ***Phi Delta Kappan*** (October, 1972) read, "Goodbye IQ, Hello EI (Ertl Index)." This article carried an explanation by Ertl of his neural efficiency analyzer which measured the speed with which information is transmitted from one neuron to another neuron in the brain. He theorized that the speed and intensity of response by the brain to stimuli is related to the capacity of individuals to process cognitive or affective stimuli. Ertl said in his interview with the Kappan reporter,

> This measurement is only peripherally related to intelligence as defined as a score on an IQ test. . . . the criteria I am using for test validity are medically based rather than related to psychological test scores.

The typical definition of IQ as referred to by Ertl is that it measures how efficient the environmental background has been during the total life of the individual in stimulating him in the performance of increasingly complex cognitive tasks. In the same article there were published comments on Ertl's instruments. Some of these comments were as follows:

> ". . . the neural efficiency analyzer may be the technological breakthrough that will end culturally biased intelligence testing. I am not clear about the morality of the whole thing. . . I am sure. . . that IQ tests have been misused absolutely disgracefully. . . This test is better and. . . the potential for misuse is less. . . ."

In my view, Ertl's creative idea is a positive step in the direction of non-biased testing.

Ertl incidentally became interested and determined to discover another way of identifying intelligence or potential when he received an equivalent IQ score of 77 during his graduate study in psychology. Ertl had just come to this continent and in a sense could have been considered disadvantaged. He commented further in the article that he didn't know which factors of the intellect were important for survival; it might not be the ability to get a B.A. degree from a university. Perhaps success quotient is a better title than intelligence quotient.

Along with this same line of thinking, we find more and more that terms such as "developed ability" are being used instead of IQ.

Guilford (1968) discussed limitations of conventional tests saying, "The tests sampled relatively the more routine mental operations." Taba (1966) has stated that

> . . . the instruments used for testing intelligence identify only a particular, limited potential, largely, the capacity to manipulate verbal symbols and abstractions.

Guilford in his analysis of test results of identical IQ scores discovered that those children tested were very different intellectually. They were weak or strong in entirely different areas In the case of two boys with extremely high IQ scores, one was very strong in verbal ability and weak in the area of math while the other student was extremely strong in math and considerably lower in verbal skills.

Guilford's (1956) "The Structure of Intellect" has exposed 120 facets of the intellect for the consideration of test makers and curriculum and/or instructional technicians. Unfortunately, our present tests have used a very small percentage of these 120 facets of the intellect. I'm happy to report that progress toward isolating and testing for these specific areas is being made by Mary Meeker, Catherine Bruch, and others.

Considering the structure of the intellect and its three faces—products, operation, and content—and at the same time removing oneself from the so-called standard culture, one realizes that the Indian on the plains, the rural student on the farms, the woman in the home, the Mexican worker in the field, and the Black man in the inner city all have shown exceptional use of the varying combinations of products, operations, and content in their effort to survive overshelming odds. All of these disadvantaged persons are using mental processes with different levels of proficiency. They are using as content those sociological items which are familiar to them. Therefore the first step in the identification of the disadvantaged gifted should involve an assessment of the level of activity of the mental processes of the subjects. The second step should involve the analysis of areas of their strengths and weaknesses as measurable by current popular tests.

The first step would involve development and use of techniques which are relatively strange to us now. The various facets of the intellect would need exemplars of observable behaviors, which indicate great capacity within these areas.

Recently in a private inquiry I was conducting I asked a group of Puerto Rican teachers to give me some examples of behaviors not related to academic achievement which led them to consider a child as gifted. A few of their examples were as follows:

1. A second grade child prefers to make up his own musical instruments instead of copying those from the pictures.
2. Child fantasizes or uses many resources to fabricate tall tales.
3. Child is curious and asks questions like, "Why don't people fall off the earth?"
4. Child has insatiable curiosity.
5. Child is able to grasp inconsistencies.

Even on this level it is apparent that teachers are regularly using non-test methods to identify so-called gifted students.

Many researchers have experimented with methods which permitted the examiner to use data from sources other than the standardized IQ test in identifying gifted students. Renzulli, Callahan and Hartman (1970) have developed a teacher rating scale which serves as a means of identifying by observation. Some researchers have been working with a classification of activities of the disadvantaged as they are related to the structure of the intellect (Torrance, 1968). Biographies of great men considered disadvantaged are being analyzed to discover indices of their brilliance. Clifford Stallings (1972) has advanced the idea of environmental testing in which familiar environmental sysbols of the community are used to measure recall.

Torrance and Khatena (1970) have devised a screening device for identifying creativity in gifted adolescents and adults. The instrument is entitled "What Kind of Person are You?" It is based on introspection and self-concept. Torrance's (1966) tests of creativity are well known and have been used quite extensively as a method of identifying the gifted disadvantaged. Catherine Bruch's (1971) initial results from her experimental work with the Abbreviated Binet for Disadvantaged (ABDA) show that the IQ is raised an average of five points when re-scored using the ABDA methods on protocols of Black children.

The Alpha Biographical Inventory (Institute for Behavioral Research in Creativity, (1968) gives us another strategy for identifying creative talent among disadvantaged. The developers of Alpha indicate that it can be used as an aid in identifying talents which are necessary for academic work as well as a variety of other work situations.

It seems to me that a concentration of research in the clarification of behaviors which signify the various mental processes will make observation or testing sessions much more

meaningful for the disadvantaged. More significantly, such efforts will place at the disposal of those persons faced with identifying the disadvantaged gifted a more consistent system of procedures.

The second step, which involves the analysis of a student's strengths and weaknesses, should make use of such methods as puzzles and recall tests. Tests should be used to point out weaknesses in various areas for the purpose of exercising these areas and thus strengthening them. Sensible use of current identification instruments should point out weaknesses but should not obscure capacity in mental ability.

Reports by Nancy Bayley (1965) on the motor test scores of infants indicate that environmental factors begin making a difference in responses to tests after the first year. This finding by Bayley, along with basic ideas of my own, lead me to suggest that we begin our identification at an early age. Instructional procedures should involve exercises which would stretch all areas of the intellect and, as this is done, children with outstanding capacities will emerge.

To summarize my presentation on identification of the disadvantaged, ***awareness*** of the environmental, sociological, or cultural differences of individuals and the influence of these differences on exhibited behavior should be the prerequisite understanding of those persons directly or indirectly involved in identification. It is then necessary for these same people to have a thorough familiarity with the mental processes as presented to us by Guilford, Piaget, Bloom, and others, and a familiarity with an open-ended list of exemplars of these processes. Next, an analysis of weaknesses should be used for prescriptive purposes, with the idea that follow-up identification techniques will also be employed. Since environmental forces play such an important role in intellectual development, early intervention followed by circular diagnosis and intervention should be of prime consideration.

All groups of disadvantaged children use various mental processes in their everyday movement through life. Cultural stereotypes have often created a mental block as steps have been taken to identify these processes. Consequently, our perspectives have been limited. I'm reminded of T. S. Eliot's poem, "Family Reunion."

> But the circle of our understanding is a very restricted area.
> Except for a limited number of strictly practical purposes
> We do not know what we are doing;
> And even, when you think of it,
> We do not know much about thinking.
> What is happening outside the circle?

On every level concerned with the job of identification, we must unlock our set and established thinking patterns and explore new avenues of research. We must enlarge our circle of identification so that the question posed by T. S. Eliot's poem may yet be met by the affirmative response that we are finding out what is happening outside the circle.

PART TWO

PROGRAMS FOR DISADVANTAGED GIFTED STUDENTS

While effective identification procedures are of paramount importance, they are wasted if the program that follows does not meet the educational needs of the identified students. A number of presenters at the conference were closely involved with programs for the disadvantaged gifted and they shared their valuable experiences with other participants.

Part Two contains two topical areas. The first is related to administrative provisions for programs for the disadvantaged gifted. Essential to any successful program for the disadvantaged gifted are those administrative procedures which create a foundation of support, both in terms of personnel and funding, which will insure the program's continuance. Educators who concentrate their efforts on the day-to-day needs of students and teachers in the classroom with the vague hope that administrative backup will somehow naturally result have in the past seen their plans, strong though they may be, die for lack of adequate support. Hence it is incumbent upon those interested in the education of the gifted to build delivery systems of support at the federal, state, and local levels. An important step in this direction was taken by the United States Office of Education in its establishment of the National/State Leadership Training Institute on the Gifted and the Talented in 1973.

Following this topic is a compendium of the presentations which outline specific program considerations for the disadvantaged gifted.

ADMINISTRATIVE PROVISIONS FOR PROGRAMS FOR THE DISADVANTAGED GIFTED

Sato*

The National/State Leadership Training Institute on the Gifted and the Talented (N/S-LTI-G/T) has been established to assist each participating State by training a team to plan and implement programs for gifted and talented children and youth. This project has been funded by HEW/USOE through EPDA funds to the Office of the Superintendent of Schools of Ventura County, California: Project headquarters is located in Los Angeles, California.

The USOE Commissioner's Report to Congress, ***Education of the Gifted and Talented: Report to the Congress of the United States, 1971,*** recommended that national leadership training institutes be held ". . . to upgrade supervisory personnel and program planning for the gifted at the state level." The N/S-LTI-G/T has been set up specifically to meet this recommendation through the following objectives:

1. To establish and maintain a working communication network among central Office of Education, Regional Offices of Education, States, Local educational agencies
2. To formulate and initiate State and Regional team activities involving unique planning and program development for the gifted and the talented
3. To train selected individuals both nationally and regionally at regular training institutes or workshops (of sufficient duration)
4. To develop, reproduce, and disseminate some appropriate documents, publications, and media products on the gifted and the talented through N/S-LTI-G/T-sponsored workshops and institutes

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*Information in this section has been updated due to project reorganization since this conference.

5. To increase public consciousness, awareness, and knowledge about the gifted and the talented.

As a major means of accomplishing these objectives, three two-week Leadership Training Institutes (LTIs) are being conducted each summer through the Summer of 1975. Each LTI trains up to five persons from each of the 10-16 participating educational agencies. Faculty and consultants are hired to conduct these Summer LTIs.

The full-time Director is Irving S. Sato; Executive Director is David M. Jackson.

Gallagher

When one thinks about getting the government to help with problems, the usual move is to say, "Let's pass a law," and indeed that is one major avenue of support. However, there are two other branches of the government, and each one of these has a potential role to play in further governmental efforts on behalf of the gifted. While the judicial branch of government traditionally has not been brought into play in this area, it has acted in the field of the handicapped where major recent court decisions have reaffirmed the right of every American child, regardless of his problems or characteristics, to an education related to his own needs.

However, important moves have been made for the gifted last year within the executive branch of government. Stimulated by a Congressional request for a status report, the Office of Education initiated a series of regional hearings. A number of positive steps have been taken through the executive branch without recourse to actual legislation. One of the most significant of these, of course, has been the establishment of the Office of the Gifted and Talented within the Office of Education. Although the staff is small, consisting of two persons, that is more than we have had before and is symbolically important.

Commissioner Marland, now Assistant Secretary of Education, has pledged his own interest in this area and has encouraged some of the earlier developments of this program. One significant move has been the establishment of the National/State Leadership Training Institute, with an initial grant awarded to the Illinois State Department of Instruction. The Institute will be designing and developing a series of planning and training activities, communications services, and management support services to help program specialists improve the quality and extent of coverage of present activities.

In each of the ten regional offices of the Department of Health, Education, and Welfare, one of the professionals has been assigned responsibility for education of the gifted. This person will serve as a nucleus of an action team involving specialists in gifted education from each state, regional staff, and other people interested in education of the gifted. A national information center for the gifted and talented will be established at the Council for Exceptional Children in Washington, D.C. Hopefully some funds will become available through Title V, ESEA, which is designed to strengthen state departments of education. One of the clear ways in which to strengthen our efforts, of course, would be to hire and train state specialists in educating the gifted.

Finally, some small amounts of research money are available to conduct a national field survey to identify successful programs in this area. A research and development effort by the Southwestern Educational Development Laboratory to test prototype materials and to identify gifted and talented children among bilingual and minority groups will also be supported.

In an innovative effort, a special program was established with the Explorers Club which allowed a small number of gifted youth to go on world-wide explorations with established scientists. They went to Greece on marine archeological digs, to Canada to view a solar eclipse, and to Nyiragongo on a volcanological expedition.

All of these efforts are reasonably small, but they carry much promise. We hope that the executive branch continues to show the vigor and interest in this program that it has to the present time. Many good things can happen through the existing efforts of the staff of the Office of the Gifted and Talented in cooperation with those in the field who sincerely want to help.

While in Washington, I found that people who do not deal directly with education still conceptualize education as being a very simple process, primarily involving the direct contact of the teacher and the student. The notion that education is a complex business rivaling in its organizational needs large corporations, labor unions, and other major elements of our society, is very imperfectly understood. It is useful in this regard to try to help the public and decision-makers distinguish between two major parts of the educational effort. One is the direct delivery of educational services, which means the direct contact of the student with teachers and the materials of the educational process. The second part is the various supportive educational services needed to insure that delivery occurs at the right place, at the right time, and with quality. Indeed, the direct services and supportive services of a program are like the two horses pulling a carriage. They must advance together if the trip is to go smoothly.

Unless 10% to 15% of the total budget is provided to supportive services of the total program, it is unlikely that anyone will have much of a quality education program. The nature of such supportive services is as follows:

1. Research and development to provide us with more effective programs and procedures
2. Training activities to guarantee a continuing flow of quality manpower
3. Demonstration activities to illustrate new and better programs
4. A planning and evaluation effort to help allocate resources wisely
5. A communications system to help educators keep in touch with new developments.

The attractive part of placing major emphasis on supportive services is that they provide us with the essence of quality education without the huge major costs that are inherent in the problem of the direct delivery of educational services to huge numbers of children. I clearly support legislation to improve these support areas in preference to a massive teacher subsidy program that in my opinion would have no chance for passage.

Frierson, in a recent review, remarked on the great increase of interest in the area of research studies on the stimulation of creativity and giftedness. Unfortunately, it seems that that great interest is shown in small quantitative studies rather than in larger major ideas. This is probably symptomatic of the field of the gifted. Major research programs are rarely carried out and the funds for such programs are rarely available. So the literature is filled with small master's theses, doctoral dissertations, or studies that various professors can do on the side.

If we have learned anything in the last few years in research, it is that major findings and major developments require major resources to be allocated to these problems, so part of any support bill should be enough resources to allow for significant research and development efforts in this major area.

One of the requirements for getting useful federal or state action is some degree of realism. We are, for example, fond of talking about providing more teachers who are skilled in working with gifted and talented students. However, a report by Martinson, reviewing the current status of gifted children, suggests that, with a modest level of 2% of the students being considered gifted, a minimum of 44,000 specially trained teachers would be needed to deal with that number of youngsters. It is quite clear, from the lack of training facilities and the total impossibility of training a number of that magnitude, that the focus of the program has to be on something other than the training of the classroom teacher ***per se.***

With the state of funding the way it is these days, it appears that we are going to rediscover the fine art of scrounging. This was a highly descriptive term in World War II and afterwards, denoting the ability of people to find resources in all sorts of unusual places. When I was in the Navy we had another term for it, the "Midnight Requisition." While we probably should not be about too much Midnight Requisition, we should be alert to any and all possible openings that can occur that can provide a wedge to excite the public, to interest them, and to demonstrate what can be done in a program that has some imagination and drive.

One of the best recent examples I have seen of the characteristics of scrounging is provided by an imaginative bureaucrat, Bob Radford from the Regional HEW office in Seattle. He is proposing to the Department of Defense that some of their military air transport planes might very well be used to carry some gifted youngsters on exploration teams to expedition sites in various parts of the world. If the money spent in travel can be picked up on by military air transport, then there is that much more money left over to be spent on new children coming from inner-city programs. Such children could have their first exciting experience with a model that provides them with a pattern of behavior and a style of life that could be well imitated when they return to the United States.

There are relatively few programs described in the literature that focus on the culturally different student of high academic potential. In most instances the emphasis has been on students from these sub-cultures who are in serious academic difficulty and major attempts are being made toward remediation. In some respects this would seem to be an inadequate strategy. A better one might be to deal with those disadvantaged students who have strong leadership potential and high intellectual talent that will enable them to stimulate and develop the potential of their cultural subgroups.

One distinctive program reported in the literature by Tisdall (1968) was a residential high school for intellectually gifted but culturally disadvantaged children in the state of Kentucky. This program for ninth and tenth graders was coeducational, non-graded, and racially integrated. The school was located in a rural area of Shelby County, Kentucky. The objectives of the program were to provide a high school program preparing students for admission to colleges and universities, remedial instruction for talented students not living up to their intellectual potential, and, incidentally, to provide us with more information about such students. Of the 400 students attending, the average Wechsler IQ was 121. Considering the sociocultural background of the students, it's reasonable to believe that their aptitude was considerably higher. Upon entering the program, it was found that these students were quite under-motivated and indifferent toward learning. They didn't know how to study or organize their work, were oriented toward short-range goals, and had a significant disregard for the fine arts. They liked structured activities and, as Riessman suggests, preferred concrete to abstract learning experiences.

While the program content was not unusual for high school, including the standard science, social studies, English, language, etc., the emphasis was on individual and small group instruction, with no class having more than twelve pupils. The general estimate of the faculty was that although only 10% of the students who entered the school in September were achievers, at the end of the first year about half of the student body had become achievers, with students winning prizes in national mathematics and writing contests. Several were accepted in the Upward Bound programs.

One of the unhappy postscripts that has to be applied to this description is that the program itself was disbanded after a couple of years. This was not due to a failure of the program itself, but rather to the social and racial problems that were generated by its interracial character in a southern state.

The ideas suggested by Riessman listed at the end of this article lead to certain kinds of program outlines.

The culturally different gifted like to deal directly with experience rather than with words, they are externally oriented rather than introverted, and a strong structured program is desired. All factors suggest to me that one of our major efforts should be to extend the program beyond the traditional school walls and to involve the community surrounding them. The need for an appropriate model of behavior with which the talented youngster can identify has a solid theoretical base in the work of Bandura and his followers. It is the best insurance that constructive patterns of behavior will be the outcome of an enlightened educational program.

Can we develop a program that will allow the gifted to leave the school for a period of time and spend that time in a business, in a laboratory, in a doctor's office, in a community service program, in those places where they can learn the essence of our culture? In these situations they can learn about the productive dimensions of this culture and not the destructive culture or ecology in which many of them may be immersed. In this respect we may have to go, not to the federal government or the state department of education, but rather to private sources, such as industry or foundations that are looking for constructive ways to use their own energies and resources and are turned on by such a concept or idea. We are going to have to scrounge, ladies and gentlemen, and I can only hope that scrounging will be good for us.

PROGRAM ADJUSTMENTS FOR CULTURALLY DIFFERENT GIFTED*

Special Characteristics	**Educational Change Implications**
Physical and visual rather than aural	Presentation of material should be concrete with a minimum amount of time devoted to teacher lecture or extended discussions; i.e., students should do experiments or go on field trips prior to discussions of general concepts. Role playing an effective device.
Content-centered rather than form-centered	The emphasis on inquiry training and creativity should be replaced, at least initially, by what is to be learned. The learning of a process or method of attack in problem solving is a more abstract concept and these students often are not ready to consider that.
Externally oriented rather than introspective	Children from limited verbal environments tend not to be introverted or introspective and will not respond well to requests for self-examination of their own feelings or thoughts. They require the stimulation of concrete, external sources.
Problem-centered rather than abstract-centered	They should be presented with specific situations which only gradually lead to inductive thinking. The use of academic games and role playing brings forth the concrete and motoric response.
Slow, careful, and patient rather than quick, clever, and flexible	There is a temptation to skip steps and leap forward with gifted students. This should be resisted and a methodical, orderly progression from one step to the next is needed.

*Riessman, F., "The Slow Gifted Child," in Gallagher, J. (Ed.), Teaching Gifted Students, Boston, Allyn, and Bacon, 1965.

Special Charateristics	Educational Change Implications
Need for structure and control	The elements of progressive education such as permissiveness, introspection, flexibility, and lack of discipline and authority are ill-suited to this group. There is a need for firmness and structure, particularly in the beginning program stages.

SPECIFIC PROGRAM CONSIDERATIONS

Ballinger and Schrecengost

The Mentally Gifted Minor (M.G.M.) program in the Pleasant Valley School District is one example of what a small school district can do to meet the needs of its identified gifted. The district is located in Camarillo, California, a semi-rural area about fifty miles from universities, museums, and cultural events of major significance. The pupils might be considered disadvantaged from this standpoint, plus the fact that twelve percent of the M.G.M. pupils are culturally different and eight percent of the total M.G.M. enrollment consists of gifted low-producers who exhibit learning disabilities.

The Pleasant Valley School District has eight elementary and two intermediate schools, and six thousand pupils. In 1969-70 a committee of teachers and administrators formulated a plan for an M.G.M. program at the elementary level. It was decided at that time that a pull-out program with seminar-type classes would be the best course to follow. The proposal was submitted to the state and the program began in September, 1970, with one hundred fifty pupils in grades two to six, and two teachers. It has since expanded to two hundred eighty-eight pupils, three teachers, and one teachers' aide.

There are several Pleasant Valley schools in which there are only one or two identified gifted at one grade level. Overlooking the needs of this minority would be easy if each school were totally responsible for meeting the needs of its own gifted students, so pull-out M.G.M. classes seem to be the best way to serve these pupils at this time

The enrichment classes (as they are called) are housed at one school in a quadrivium, a distinct advantage for team teaching.

The M.G.M. pupils in grades two to five are bussed twice each week for ninety-minute periods. These class times alternate so that no child misses the same time in his own class at his home school twice in one week. Sixth graders attend only once each week, but for an entire morning. The two hundred minute minimum weekly requirement set by the state is met by class time of 180 minutes, several all-day field trips, and home projects throughout the year.

Each M.G.M. teacher has six groups of sixteen pupils. Two preparation periods per week are also included in the teachers' schedules, enabling them to plan curriculum and field trips, contact speakers, and order materials.

Pull-out programs are generally more expensive than cluster grouping or some of the other approved kinds of programs for several reasons:

1. Extra teachers must be provided for the M.G.M. program.
2. Extra classrooms must be provided and equipped with special kinds of equipment and supplies.
3. Transportation must be provided from home schools to M.G.M. classes.

However, there seem to be several advantages to a pullout M.G.M. program, especially for

small school districts. The opportunity for gifted students from several schools to work together helps them become aware of their own strengths and weaknesses; students can be placed in groups smaller than regular class size which allows for greater individualization; they are provided with special equipment and materials which are not usually available in regular classrooms; they can have specially trained teachers who are cognizant of the needs of gifted children; and there are more opportunities to have outside speakers come into seminar-type classes. Field trips and guided tours can also be upgraded at least two years above grade level for a group of gifted students.

In developing a curriculum for the Pleasant Valley Schools M.G.M. program, an effort was made to choose subject matter which would be "qualitatively different" from the curriculum used in the regular classrooms of the district. However, in doing so, it was apparent that with the constantly changing curriculum and the freedom of classroom teachers to teach a variety of subject matter within the curriculum, it would be difficult to choose subjects for enrichment that did not overlap those subjects included in the district's curriculum.

At the same time, the real meaning of "qualitative differentiation" was becoming more clear, and it was felt that the Pleasant Valley M.G.M. program could be made different not through choice of subject matter but through method of presentation, materials used, and activities. A curriculum which develops a feeling for large concepts rather than for the collection of data would seem to be appropriate for gifted children. The real criterion would be the provision of activities which involve higher levels of learning—learning which is affective as well as cognitive.

The curriculum, then, is divided into four large academic areas. They are science, math, social studies, and humanities and arts. Approximately nine weeks are devoted to each of these four major areas. In the primary grades, the time spans are broken into shorter periods with many interrelated activities, but the average time spent on each specific area is nine weeks.

As specific subjects within these four major academic areas were chosen, care was taken to develop a curriculum which would expand concepts at each level of presentation and build upon previous experiences in such a way as to give the students a feeling for the continuity of learning. Subjects were chosen which were felt to provide many opportunities for divergent thinking and open-ended questioning. For example, the social studies curriculum is primarily concerned with man's development and progress through the ages. The math curriculum has been structured with this same basic theme, in that at each level the students are confronted with the prospect of man's ever increasing knowledge and advancement. The science curriculum and the humanities curriculum are both designed to give the students the opportunities to make judgments, explore their own creativity and inventiveness, and at the same time become aware of man's ability to evaluate, create, and invent. It is this underlying stream of continuity that has been the most prominent factor in choosing the curriculum for the Pleasant Valley M.G.M. program.

The curriculum which has been developed and used is a highly flexible instrument. It is constantly subject to change as the students indicate preferences or a desire to pursue a particular subject in more depth. Subjects which are not well received might be changed or omitted from the curriculum.

Other aspects of the curriculum are resource persons, field trips, reference materials, and audiovisual materials. Although rural in nature, the community of Camarillo does have among its population a high percentage of professional and military personnel from two local government installations. These people and others like them are called upon to serve as guest speakers for the M.G.M. classes. Appropriate field trips are taken both within and outside the limits of the county. The Ventura County Schools Library and Audiovisual Department supplies a large part of the reference materials used in the program.

An important part of the program is the assignment of projects to be done at home. These projects are assigned to the students four times during the school year in the form of contracts or options. These contracts give the students a great deal of latitude in choice of project and method of presentation. The contract gives the student a chance to develop an awareness of his area of particular interest and ability by allowing him to make the choice. By fulfilling these contracts, students learn time management, use of materials, development of research skills, and goal-setting. Upon completion the projects are presented to the group, at which time the students evaluate each other and themselves in terms of effort, creativity, presentation, and the learning experience.

Evaluating gifted children and gifted programs is not easy. Most of the evaluation tools are purely subjective, relying heavily on parent, teacher, and pupil observation. Small group meetings of parents and M.G.M. teachers are held several times each year to discuss the program and to evaluate the participation of the children involved.

Some of the results of what is done in the Pleasant Valley School District enrichment classes may not be evident for many years. An attempt is made to expose these youngsters to widely varied occupations and hobbies, and numerous opportunities are provided which allow them to explore, examine, and delve into subjects fascinating to them, which may lead to future careers or avocational interests. Many parents and students have indicated that if it weren't for M.G.M. classes, school would be dull, boring, and a "have-to-go" type situation. Hopefully, the methods and materials used, the opportunities provided, and the curriculum presented will have many benefits for the Camarillo gifted pupils in the years to come.

In summary, the Pleasant Valley School District M.G.M. program seems to meet the needs of the gifted students in the community through its structure, curriculum, and philosophy.

Arnold

In 1969, the California legislature amended the laws concerning identification of gifted pupils to open qualification to that portion of the population so disadvantaged that they are unable to qualify on standardized tests. With the addition of separate criteria, new dimensions for qualification were outlined and new techniques were to be utilized. It was on this basis that the Educationally Disadvantaged Developmental Pilot Programs were started in Los Angeles.

During the 1971-72 school year programs at Broad Avenue and Fenton Avenue Elementary Schools were funded by the State Department of Education. The experiences gained from these programs provided a model for the program at Marvin Avenue Elementary School during the 1972-73 school year. A program of three hours per week is now being offered there to clusters of pupils enrolled in grades 5 and 6 who qualified as "culturally disadvantaged, underachieving, mentally gifted minors." While providing a wide variety of enrichment and remediation activities, the teachers and the school counselor are able to observe these pupils in a "situational testing" environment. This approach combines curriculum modifications designed to meet the pupil's individual needs with an extensive on-going evaluation of the pupil's progress and potential.

The first and most important step in identification was the selection of potential candidates. All members of the faculty had the opportunity to nominate pupils after they thoroughly discussed the qualifications and potential of disadvantaged pupils. Emphasized were the many and varied indications of giftedness in addition to school performance and test scores. To assist in the initial school screening, checklists of traits were provided to the faculty. A math resource teacher who worked in the school with enrichment and remediation was especially effective in identifying pupils with potential giftedness.

To assure that a thorough search of the entire school population would be made, the school counselor and a retired counselor, especially effective in searching out potential giftedness,

coordinated the screening. Following this, a complete individual case study was developed for each candidate. Results of the multi-screening revealed:

Number of pupils - 25 (10 Boys, 15 Girls),

Range of Scores - 110-149 (Stanford Binet),

Grade levels - 9 Fifth Grades, 16 Sixth Grades.

The three teachers selected to instruct the clusters and the part-time grouping are qualified by background, interest, and enthusiasm to provide new curricular experiences to meet the needs of gifted pupils. They are sensitive and understanding towards disadvantaged pupils, willing to experiment in new directions, and aware of these pupils' differences in study habits and performance. The kinds of experiences provided require imagination and creativity so that a broad variety of activities and ideas is presented. By such exposure the teachers have an opportunity to observe the development of the pupils' gifted potential. At the close of the situational testing period, June, 1973, teachers will form part of the evaluation team to determine which pupils are qualified under separate criteria.

The program consists of daily instruction to the cluster within the regular classroom. Each teacher has a cluster of 8-9 pupils. Three times a week the 25 selected students meet for two hours of specialized enrichment provided by each of the team of teachers on a rotational basis. At that time the "enriching" teacher's other pupils are taught by the other two team members. This three-teacher model has stimulated a sharing of activities, interest, and enthusiasm. A project room is available for the specialized work three times per week. The advantage of the additional space is a tremendous aid to the organizing of materials, projects, and the interaction of the pupils.

Separate criteria provisions require eventual scholastic achievement at a high level, so most program emphasis is directed toward that end. Disadvantaged pupils by their very definition have been deprived of many learning experiences; however, they bring certain strengths into the classroom. These pupils seem to do well orally, are inquisitive and alert to new ideas, show ability in non-verbal creativity, and possess productive coping powers, independence, and flexibility. Initially the enrichment teachers built on these strengths. The challenge of this program is to expose the pupils to a broad variety of activities and ideas that will stimulate them to show evidence of giftedness. At the same time, program emphasis includes experiences which might overcome opportunity shortages the pupil has suffered. Practice in memory training, listening skills, language enrichment, and basic skills are stressed.

During the phase of the program when candidates were selected, the counselor provided assistance in interpreting cumulative records and test data and in helping to delineate the separate criteria standards. Once the instructional program began, the counselor participated in the situational testing by observing pupils in the classroom, conducting in-depth interviews, conferring with teachers regarding the needs of individual pupils, meeting with the pupils in small groups, and arranging parent conferences, when possible. In addition, the counselor conducted individual evaluations of the pupils to discover the extent of their potential by using a variety of devices. In addition to traditional instruments, the counselor also prepared the developmental case studies for presentation to the identification and placement committee and served as a member of that committee.

Evaluation will include the following areas: the instructional program will be evaluated on both objective and subjective measures, including pupil reactions, parent responses, teacher checklists, standardized measures of achievement, and measures of creativity and thinking; counseling support will be evaluated in terms of assistance to teachers in diagnostic and prescriptive information, conferences with students and parents, case study folder development, and standardized measures of progress.

Epley

Gifted programs are built around individuals. Sometimes those individuals elude identification. Searching for the potentially gifted and supporting, strengthening, and uplifting talent is a total commitment for those who focus upon the worth of all individuals. As the student becomes a partner with faith in himself, the role of the searcher, supporter, extender, guider, catalyst, teacher becomes easier and teamwork prevails. A few guidelines for the development of giftedness could be:

1. Know the student well, analyze what he can contribute to his own development.
2. Solicit help from the student and explain where you hope he can develop.
3. Be open, optimistic, supportive, scholarly.
4. Provide instruction in processes, strategies, coping behaviors, and skills as needed.
5. Build a curriculum with the student which emphasizes improvement of memory, vocabulary, verbal fluency, judgment, and critical reasoning.
6. Teach him to search for alternatives, communicating in multi-sensory, multi-media methods and insuring a broad range of learning and thinking styles.
7. Help him to imagine, create, re-organize, relate, interpret, and generalize whatever is needed to be a producer.
8. Aid the student to see possibilities in his world, to elaborate upon the smallest beginning, to persevere, to question, to inquire, and to discover each facet of his personality, creativity, and potential.

If the above seems too exhaustive, never-ending, and impossible for one teacher to achieve, take heart. The rewards are great, the miracles many, the results long lasting.

Sisk

The problem of locating disadvantaged talent with conventional tests is a serious one. The instruments used for testing intelligence identify only a particular limited potential, largely the capacity to manipulate verbal symbols and abstractions.

Teachers, when asked to identify gifted, look for characteristics such as alertness, curiosity, verbal ability, aggressive abstract thinking, and a sense of assurance of self.

Recently, by means of identification through process rather than product, the disadvantaged gifted child is beginning to emerge. The disadvantaged youngster, when placed in situations in which his natural motivation as a child is used, allowing his mental development to grow through involvement in relevant problems, begins to exhibit characteristics teachers view as giftedness i.e., aggressiveness in learning (Dwyer, 1970). The child is provided a role in problem solving from the personal to the general hypothetical. Most important is the cultivation of the attitude that academics and formal learning are purposeful and relevant for life experiences.

When there are positive interactions between the self in a rich environment of materials and mediating adults, these in turn are interactive with events (which can be defined as meaningful relevant life experiences) and generate creative energy. Such experiences should be based on a thorough understanding of the disadvantaged child and an acceptance of where he is. This is predicated on the teacher's ability to accept himself or herself. Consequently, in the teacher training program for disadvantaged gifted, much time should be given to experiences in group dynamics and small group experiences based on humanistic principles which help to place teachers in tune with one another and with children.

Teachers are encouraged to remove from their teaching the unproductive burden of opposing the child's present concerns and to transform the child's view of the teacher from one who prohibits, requires, and judges to one who designs, provides, and mediates.

Specific competencies needed by teachers of disadvantaged gifted are as follows:

1. To develop knowledge of the educational, social, and emotional needs of the disadvantaged gifted
2. To diagnose the disadvantaged gifted student's educational, emotional, and social problems
3. To demonstrate competencies in planning appropriate teaching strategies for the disadvantaged such as movement lessons, problem solving sessions, encounter lessons, and simulated learning
4. To utilize group dynamics in working with groups to function as agents of change.

One of the major spillover values in a teacher training program based on humanistic principles is that the adults in teacher training in turn catch on to the enthusiasm of self-development. Creative energy is generated in the teachers. This dynamic involvement in teaching is a far cry from traditional education and tends toward self-education.

Education for the disadvantaged gifted becomes a dynamic partnership between a teacher-mediator and a young child, both in the process of becoming, both building on their unique strengths to overcome weaknesses.

Stallings

I once listened to a counselor explain in a heated meeting that we have excelled beyond our wildest dreams in developing the cognitive process, but have failed miserably in developing within our students some sense of self and relationship to this world. There is no doubt that a proper blend of the cognitive and the affective domains is needed in developing good education within urban schools. A strong cognitive curriculum based on information developed outside of a disadvantaged child's background does very little in preparing him for an affective and psychomotor world waiting just outside the classroom door. Teachers should remain sensitive to the fact that 70 percent of the children within their urban classrooms return to their community to lead productive lives. The 30 percent who will go on to college and professional careers will in some cases leave the urban community and return only in a professional role. This statement raises some serious questions for the urban teacher. Do we prepare curriculums for the 70 percent to become responsible citizens within their communities or do we concentrate our energies on the 30 percent who will probably live outside of the urban community?

> Dewey once said,
>
> It is well to "do good" to others, but it is much better to do this by securing for them the freedom which makes it possible for them to get along in a future without such altruism from others.

Dewey's statement closely approximates the importance of motivation. We in education know that the product of motivation is independence. Urban teachers are well aware of how difficult it is in some cases to motivate a child who has been exposed to few models. It should be noted that there is no cookbook recipe to motivate gifted children. Each child is different and unique in himself. The urban teacher might utilize the following four-phase procedure to acquire valuable information and to motivate gifted children.

Phase I might be to assist the child in planning his occupational goal. Teachers often observe that although students can verbally identify a number of highly specialized professional roles, in many cases their definition of that professional role may be far removed from the correct definition. Often having a student define or report on how to acquire the necessary skills to reach an occupational goal will provide a first clue in developing strategies on how to motivate that child. Valuable input may be injected by the teacher into the child's plans for obtaining his objective. During this phase the teacher should be especially sensitive to the fact that allowing the child to develop realistic and attainable goals will build self-motivation. Also during this phase a strong interpersonal relationship of trust and confidence with the student might make the teacher's opinion a major reinforcer in motivating future behavior.

Phase II would be to determine if there is an individual within the community who could assist teachers in developing the student's occupational model. Teachers will find parents keenly interested in their children's education but lacking in basic information on how to achieve their educational objectives. We know that children learn a great deal by unconscious imitation of people. We also know that the urban child's model may be far removed from his occupational choice. Often in urban communities the child's model may well range from the community businessman to the pimp and hustler of the street. A common conflict for the urban child is to plan a career (which in many cases takes years), when a community hustler obtains instant success in a matter of weeks. Teachers have no difficulty determining which model or role is best in the long run. But a young man or woman whose whole life is centered around the here and now will definitely be in deep conflict as to which of the two occupations will contribute most to himself and his community.

Phase III needs teachers who can effectively start early communications with parents of gifted children. These teachers will find that their efforts will pay heavy future dividends in motivating the child to maximize his potential. This conversation should emphasize the child's vocational choice, but, of much more importance, it should help parents to understand how their own attitudes and relationships with their children affect the child's motivation. Providing parents with types of games and materials that would hold the child's interest are valuable keys to maintaining high motivation. Tips on college scholarship and grant opportunities are valuable. Whenever possible, the teacher should meet individually with the parents and allow them an opportunity to learn techniques in good learning procedures. Often teachers are the only professional model to which the child is exposed, and the initial contact between the teacher and child may be the only stimulus in the community to assist him in developing his desired potential.

Phase IV, the last step, is probably the simplest, but must be handled with extreme care. Urban disadvantaged children will often have a different measurement as to the criteria for success. Teachers often find themselves dismayed by the student's low regard for achievement scores as measures of success in urban communities. Educators are encouraged to let their students know that they have one or more talents by providing them with the opportunity to know and explore these talents and discover for themselves the extent of their own potential. In addition, a clear standard of excellence is needed as a model for all areas of study. The child needs to know a well written paper when he sees one and he needs to be rewarded for attaining this goal.

> Ward states in ***Educating the Gifted,***
>
> The values upheld and the skills and understanding taught through the community should reflect the needs of the society of which the school is a part.

Taba and Elkin concluded that unlocking the hidden potential of disadvantaged students requires a radical change in curriculum and teaching on all levels. Both the materials and methods of teaching need to be aligned with the psychological realities of culturally disadvantaged children. Although the learning processes of the culturally disadvantaged do not differ essentially from learning processes in general, the techniques for generating these processes do. Thus, while children in general learn better when the contents of the curriculum are geared to their own experiences as a point of departure, work with culturally disadvantaged youngsters suggests that this is a ***sine qua non*** if any motivation is to be generated. Gearing curriculum to the society in which the school is a part is a task well suited for any teacher. But to use the contents of an urban community to motivate and challenge the gifted students of your classroom is the purpose of this section.

In describing techniques best suited for urban gifted children I am defining more a process than a product. This is not to say that I am not interested in the product. The process is beyond grades or symbols. Thanks to Glasser's ***Schools Without Failure,*** we are one written step closer to resolving that conflict. What I am attempting to describe is the creation of a learning environment that uses as its primary goal the radius of the community as a basis for learning. At this point let me define the term "basis for learning." All learning within the school must be planned and implemented within the radius of the community, later broadened to other communities, and then extended to the world itself. An example of this technique in action could be in the teaching of math. Allowing students to start a unit or assigned study at the corner grocery allows each individual an opportunity to apply principles of math to an activity he or she will confront outside the school in other ways. Later, the math assignment could encompass a comparative study of the economics of an urban community as compared with a suburban community or a community in another country.

The involvement of community people in class planning can lend valuable assistance to the teacher in creating the type of learning environment that will allow the gifted an opportunity to develop alternative routes to learning. This kind of involvement will enable students to investigate subjects in an interdisciplinary approach. Community volunteers, such as gifted retired people, can provide valuable assistance in field trips or independent studies and a continuous intellectual challenge in which the student and the retired individual have similar interests.

Students in primary grades who have demonstrated exceptional talent in one or more areas should be provided with close support in their choice of new learning experiences. Piaget refers to the widening of the schema; similarly, primary students admitted to the gifted program should be provided with experiences that will enlarge their perspective on the world around them. Many deprived students have never ventured outside their communities. Integrating the proper combination of the disciplines into the learning experience allows the gifted student an opportunity to strengthen those skills necessary for investigating and carrying out assigned tasks. Each individual child finds that in order to improve in his area of interest he must develop basic fundamentals in reading, writing, and arithmetic to achieve his goal. Later the child, as a result of successful experiences, will develop the ability to critically appraise his values and those of others around him. Near the final stage of the primary grades the student begins the first stages of relating his learning experiences to history, social studies, world events, and all other areas of inquiry.

Teachers should not be afraid of the confrontation of ideas, for confrontation of ideas is the essence of personal growth. It also creates leadership abilities which can be related to political power and its association with government. The student may wish to investigate government and man's history of governments in order to prove his point. Power factors in play, work, corruption, and other involvements may also be examined. Later, in determining

effective leadership in society, other related fields could be included, broadening the student's need to investigate and research his world.

The confrontation in learning could extend to other factors such as role, status, system, culture, etc. With this, the gifted child should begin the early stages of experiences that will answer questions about himself. This stage usually begins in high school and early college.

In answering the student's questions about his relationship to the wider world, the teacher could effectively utilize a student's search for his identity to answer many of the student's problems and to enhance the student's learning by having him study the disciplines of psychology and sociology. Students with money difficulties could be allowed to investigate the interest rates of the loan companies in the immediate area. At the college level, gifted students should have gained a hierarchy of experiences that will allow them to investigate alternatives and select positive and decisive courses of action.

In conclusion, I have observed the following positive trends in educational change with school districts nationwide:

1. Redefinition of the range of potential talent and creativity
2. Emphasis on early identification of talents and on early correction of, or compensation for, pathological conditions
3. Provision for a stimulating environment for infants and young children through child care centers and parent education programs
4. Maximum reliance on self-placement, self-pacing, and self-evaluation
5. Expanded and revised concepts of "teacher" and "student"
6. Abolition of grade placements as presently conceived
7. Freedom of entry and re-entry into school at all ages
8. Motivation based on interest and appropriate learning experiences rather than extrinsic rewards
9. Early opportunity to follow special interest and talents combined with early apprenticeship and on-side educational experiences
10. Changed concepts of "passing" and "failing" and of "accelerated" and "retarded"
11. Educational experiences which emphasize the affective and psychomotor domains as well as cognitive learning
12. Experiences which allow divergent as well as convergent thinking
13. Sensitivity training beginning in early years and providing variety in means of communication and expression of ideas
14. Use of systems analysis in plotting and re-cycling individual student programs
15. Re-examination of present systems of prerequisites and requirements for study
16. Use of simulation techniques as well as actual situations to stimulate decision making and responsibility
17. Examinations based on performance to establish entry level when necessary
18. Re-conceptualization of teacher training programs
19. Maximum involvement of the home.

What is offered here is a process, not a product.

General reports describing educational procedures for dealing with disadvantaged gifted students have been made by a number of writers. High (1963) discussed programs for bright children in ghetto schools. Karnes and others (1965) discussed the educational implications of the characteristics of disadvantaged gifted. Lloyd (1966) reported on developing the creativity of culturally deprived children. McCabe (1965) made a progress report of the New York efforts on behalf of bright disadvantaged children. Torrance (1965) offered suggestions for motivating the disadvantaged gifted child.

The most extensive paper on curriculum for disadvantaged children of talent was prepared by Passow (1965) for a Columbia University conference. As the director of the Horace Mann-Lincoln School, he has had experience in finding curriculum adaptations for such children. He points out in this paper that the Guilford Structure of Intellect model implies a choice of curriculum which will provide a particular goal of encouraging or stimulating each particular factor of intellect possessed by the child. Thus the concern with creativity has resulted in a more systematic analysis of curriculum content and methodology. In addition, changes resulting in greater depth and breadth, the introduction of interface subjects (such as the mathematics of science, or the biology of space), and the infusion into the elementary school of units from such college majors as anthropology, psychology, biophysics, and sociology, have special relevance for the able. Passow feels that what is required for curriculum development with bright disadvantaged children is an understanding of the patterns of abilities possessed by individual children, and the provision of the proper match between the child's abilities and needs and the curriculum activities. He points out that curriculum change, not administrative provision, is the focus of progress. Integrated programs which consider the range of individual differences, and which produce relevant curriculum, can spill over in benefits to general education as well as for able disadvantaged children.

The effect of large amounts or unusual kinds of guidance on disadvantaged gifted students has received some attention. One of the first studies was the JHS 43-Manhattan Guidance Project which escalated into Higher Horizons. Here, as described by Passow (1965), Brickman (1963), and Hillson and Myers (1963), large amounts of guidance seemed to have remarkable effects in holding bright children in school and in sending them to college. These efforts improved motivation, reduced failure, and were generally very successful. Amran and Giese (1968) used counseling and other procedures to produce large gains in self-concept and creativity among Upward Bound college freshmen. A smaller group guidance program using resource community members for vocational information was reported by Demaris (1967) working with San Francisco children.

It is our belief that there are remarkable benefits both in large amounts and unusual kinds of guidance. We have elsewhere reported (1968) that normal gifted children easily used the services of a full-time counselor on a 25% ration (12 times as much guidance as is recommended by most writers in the field). Apparently even children without problems need guidance of this amount to feel supported enough to become creative. Disadvantaged gifted children will probably require even more.

Perhaps no one has proliferated more suggestions for the guidance of able children than Paul Torrance. His two books (1962, 1964c) contain many hints for inducing creativity which will be applicable to the disadvantaged gifted youth. In a paper, "Understanding Creativity in Talented Students," he noted among the gifted isolation and estrangement from others, unrealistic career choices, and the need for change in values and attitudes. In six different articles in Gowan, Demos, and Torrance (1967) he pleads for more sympathetic understanding of the latent creativity of children. In an article, "Motivating the Creatively Gifted Among Disadvantaged

Children" (Torrance, 1965), he indicated that guidance is needed to clear up the blocking caused by irrelevant curriculum, lack of communication, unsuitable intellectual tasks, lack of opportunity to use creative abilities or learn in preferred ways, lack of rewards for certain kinds of excellence, and lack of purposefulness. Torrance is keenly sympathetic to the plight of the disadvantaged gifted child and gives many suggestions about things teachers and counselors can do to help him become more creative.

It is our opinion that the following procedures are necessary if intervention for the disadvantaged gifted is to be effective:

1. Individual guidance to change self-concept
2. Group guidance for the maintenance of morals, with the introduction of suitable model figures
3. Remedial skills taught under special learning conditions by sympathetic teachers.

We illustrate the combination of these methods in the counselor's handling of one of the most difficult guidance challenges, the constellation of problems consequent upon high upward mobility in a bright youth from a poor background. In the first place, cutting across social gradients always makes it appear to the individual that he is in the wrong; the reaction formation built up here may result in a generalized aggressiveness which will later prove a handicap. When one is climbing the ladder, one sees others at odd angles and perspectives. So it is not surprising that the youth gets a cynical view of what he is approaching and an ambivalent picture of what he is leaving. When values are in flux, the model figure of the counselor is that much more necessary.

The following conclusions and recommendations are in order:

1. While much is known about the gifted child and about the disadvantaged child, comparatively little is known about the disadvantaged gifted youth; much more research is necessary.

2. Research in these areas and in their interface may be expected to benefit general education as well as special education by uncovering new and salient aspects of both curriculum and guidance.

3. As Guilford says, we are moving toward education defined as stimulating whatever factors of intellect the student possesses. This implies choice of curriculum and invention of specific teaching methods for practice in improving specific abilities.

4. For these objectives to be successful there must be a program of (1) curriculum innovation, (2) individual guidance to improve self-concept, (3) group guidance with model figures to maintain morale, and (4) remedial skills taught by a sympathetic teacher.

5. We know little about the effects of massive amounts of guidance on bright children, but some early probes are promising.

6. The use of modeling and model figures from the community is particularly helpful in group guidance activities with disadvantaged gifted children.

7. In general the remedy for the problems presented by disadvantaged gifted children is to start early and involve them in as many types of guidance and curriculum and with as many diverse adult models as possible, enlisting the cooperation of the home background whenever possible.

Concern for the qualities of exceptional human beings arises out of a concern for the qualities of all human beings. As our regard for the potential development of all human beings arises, we become more conscious of the needs of the disadvantaged among us. Thus

the idea of adapting education to the special problems of the disadvantaged gifted youth through curriculum and guidance changes is part of the central educational and social task of the twentieth century, to make "equality of opportunity" true in deed as well as word.

Renzulli

Although strategies for identifying different types of human abilities are in varying stages of maturity, enough is known about developing talent potential to allow us to do some systematic programing in this area. Two major factors in the development of outstanding abilities are (a) the characteristics of the teacher and (b) the relevance of the curriculum.

One major generalization about teacher characteristics stands out from the vast amount of recent literature dealing with programing for the disadvantaged:

> Experienced teachers who feel personal satisfaction in working with disadvantaged students are the key to successful compensatory education in poverty area schools *(Phi Delta Kappan,* 1970).

This was the finding of a study which investigated 32 programs reporting substantial improvements in the achievement of low income students. Thus, careful teacher selection appears to be a major consideration in programing for the disadvantaged. Furthermore, in situations where talent development is a primary goal, it is especially important to select teachers who are committed to the task of working with disadvantaged youngsters in the development of a variety of talents. Teachers without such knowledge are likely to approach talent development in a piecemeal and haphazard fashion.

Space does not permit a detailed discussion of the several approaches to talent development which can be found in the literature (see for example, Gregory, 1967 and Parnes & Harding, 1962); however, two general suggestions are offered as necessary first steps for systematic programing in this area. First, the teacher should have a functional knowledge of one or more of the models described above. Using the model(s) as a guide enables the teacher to plan a wide variety of activities that are designed to nurture specific talents. If teachers are unaware of the behavioral characteristics and dimensions of various types of abilities, it seems unlikely that they will be able to plan purposeful activities to promote the development of these abilities.

A second suggestion relates to knowledge about specific strategies that have already proved their usefulness by promoting creative problem solving in business and industry. Techniques such as attribute listing, morphological analysis, brainstorming, and forced relationships are easy to learn and readily adaptable to a variety of classroom situations. However, it is the teacher's initiative in applying these techniques that will make the difference between an exciting, "mind-expanding" experience and a routine classroom activity. The teacher who is coverage-dominated i.e., one who judges his effectiveness by the number of chapters or units that he covers during a given period, probably will never find time to develop abilities other than the so-called basic skills.

While remediation in the basic skill areas must be an important goal of compensatory education, it should not, of course, be the only objective of the programs which serve the disadvantaged youth. Activities for talent development can be built into areas of the curriculum, and because of the inherent fun and excitement of activities such as the type described above, added dividends are likely to accrue in the form of increased motivation and improved performance in the basic skills of learning.

High potential disadvantaged youngsters are vitally interested in the social changes taking place around them in their neighborhoods and in the society at large. Thus, it is little wonder

that they get "turned off" by a curriculum which deals with the exports of Brazil and the names of Columbus' ships when rallies against racism and demonstrations in Washington are the real issues with which they would like to deal. These issues provide excellent opportunities for constructing activities that promote decision making and social leadership skills. Exercises which encourage imaginative solutions to real life problems have a much greater likelihood of promoting creativity than the timeworn chore of writing a story about "what I did last summer."

In their book, ***Compensatory Education for Cultural Deprivation,*** Bloom, Davis, and Hess (1965) called attention to the importance of curriculum relevance by listing the following objectives as one of the four major goals of education for the disadvantaged:

> Increasing stress must be placed on those aspects of interests, attitudes, and personality which will promote the further growth of the individual, enable him to find satisfaction in the things he does, and help him to find meaning and fulfillment in his life. The effects of automation, the shorter work week, urban living, and the fast pace of change on the national as well as international scene require individual character development which will enable each person to live with himself and with others under conditions very different from those which have prevailed.

A somewhat simplified and yet operational definition of a relevant curriculum is: a set of experiences which deal with topics and issues that youngsters would talk about if given a free choice. If we are really serious about a process-centered rather than content-centered curriculum (and experiences that attempt to promote specific talents certainly must be considered process-oriented), then the issues that youngsters prefer to talk about, those that they discuss before and after the school bell rings, provide fertile ground for the development of a wide range of talents.

Although highly qualified teachers and relevant curricular experiences are considered to be major factors in programming for high potential youngsters, a total approach to talent development also should include a number of other characteristics. Douglas (1969) pointed out four essential elements of an ideal system for maximizing the talent potential of low socioeconomic and minority group members.

The first element is greater flexibility in the ways in which schools are operated and performance is evaluated. The classroom unit must be broken down into small learning modules where individuals and small groups become the main focus of instructional efforts. Although the school may continue to serve as a home base for the learning process, Douglas suggested that early in the elementary school years students should be provided with extended periods of learning time in institutions that usually were not considered schools:

> These would include places where knowledge is stored, such as art museums, science institutes, and libraries. . . places where knowledge is being put to work, such as farms, hospitals, airports, machine shops, sheet metal works, and construction. . . places in which some kind of education or learning or on-the-job training is under way. . . places where knowledge is being discovered, such as research institutes and laboratories.

The second element would consist of an early start in the education and socialization processes. Low socioeconomic group children often enter school with the accumulated deficits that result from poor nutrition and limited stimulation in infancy and early childhood. These deficits may lead to intellectual inhibition and an inability to take advantage of the educational opportunities that may be open to them in later life. Douglas advocated a program of nursery schools and day care centers where each child will be assured of services of

professionals and paraprofessionals who are knowledgeable about early childhood experiences that are beneficial to later development. These centers might be located throughout the community in schools, hospitals, or factories, and they should provide continuing education programs for parents and substitute parents.

An early apprenticeship is the third element of a total program of talent development. Beginning at an early age, students should be given frequent exposure to different ways of making a living and of participating in leisure time activities. Too often children from low socioeconomic group families have no real contact with a father figure or they see their parents employed only in lower level occupations. They have little opportunity to observe the variety of talents used in the broad spectrum of occupations, and thus they have a limited conception of the many kinds of talents that are valuable to our society and available for their exploration. Early apprenticeship programs would help youngsters to see the real world's conception of talent rather than the school's traditionally limited concern for only academic ability.

A final element which is necessary in the development of talent potential is the creation of a more open system. The grade-by-grade progression has failed to meet the needs of students who do not fit in at the start or who are not willing to play the game by the existing rules. If we truly respect the individual differences and preferences of all people in our society, then we should not force them to follow a relatively prescribed system of learning. Students should be free to alternate school and work experiences with other experiences which they may wish to pursue. They should be free to drop out of school for a given period of time and allowed to re-enter the system without fear of punitive action or relegation to programs which are essentially remedial in nature. Access to first rate educational programs should be readily available to every person at every stage of development, regardless of his previous success or lack of success in the system. A more open system will allow adults as well as young people to have an opportunity to explore and develop talents that may have been thwarted earlier in life.

PART THREE

EVALUATION OF PROGRAMS FOR THE DISADVANTAGED GIFTED

An integral part of each program for the gifted should provide for its continuing assessment and final evaluation. This evaluation will furnish the field of gifted education with concrete examples of methods and models which do and do not work. This is of particular importance to those programs in the area of the disadvantaged gifted, as the last few years have seen a proliferation of programs aimed at disadvantaged groups. While this is a generally promising trend, a number of these programs were not well conceived. The time is at hand to refine our approaches in working with the disadvantaged, and it is evaluation reports based on solid methodology which will provide the basis for this refinement.

As a number of speakers pointed out, we need much more information for working with the disadvantaged gifted. The following selections offer insights into the issues surrounding evaluation models and their implementation.

Dodson and Mitchell

This presentation attempts to accomplish two basic purposes: first, to describe a program model which Eastern Washington State College has been using during the past year in school districts throughout Eastern Washington; and second, to suggest an instructional model which could be used as a device for inservice teacher education, ultimately culminating in a scheme for applying the model in classroom learning experiences for the gifted minority student.

In order to delimit the term ***giftedness*** we chose to deal with the notion of creative problem solving and creative problem seeking. We feel that there is a preponderance of evidence which suggests that if today's minority students are to be able to deal adequately with tomorrow's world, the creative problem solving talents of all minorities, particularly those who would be classified as "gifted," must be developed to their fullest. We considered creativity in terms of Torrance's four-part definition which he used in his tests of creativity: fluency, flexibility, originality, and elaboration. In SPICE (School Programs for Intercultural Community Exploration, funded under Title IV), we view creative problem solving as a function of the accumulation of life experiences. One reason the minority gifted youngster has not achieved in the public school setting is often the irrelevancy of the problems with which he has been forced to deal. The SPICE model offers a curricular means by which he can operate in the search for creative problems which have relevance and meaning to him. Before describing the use of the SPICE model as a curriculum planning device, we would like to illustrate its use in our school programs in the Eastern Washington area.

The power of the SPICE planning model lies in the participation by parties who will be affected by the decisions rendered. Too often in education decisions are handed out in a rather haphazard fashion and the persons affected are expected to welcome them with deferential enthusiasm. The literature abounds with intercultural programs which have been failures. The inability to accomplish the goals usually stems from a lack of participation at the grass roots planning level by members of the minority communities, teachers, students, principals, board members, and superintendents. Often hastily conceived, such planning usually provides little emotional commitment for those being affected.

The first step in the model is a needs assessment. After identifying a number of needs, the first main group task is to prioritize them according to their intensity, effect on the welfare of the children in the school, and their "programmability." After whittling down the list, the next step is to develop a statement of the problem. A sound statement of the problem

must suggest a single programing potential which is both well focused and easily measurable (i.e., "Teachers in Chief Joseph High School are unaware of the specific needs of Indian students, which has resulted in a dropout rate four times higher than the national average").

The next step is to develop a broad goal. The question is a relatively simple one: "What does your school and/or community wish to accomplish?" A sample goal based on the previously cited sample problem statement might be: "To reduce the dropout rate so it is commensurate with the national average."

After stating the general goal, it then becomes possible to identify several rather specific objectives. Whenever possible, these objectives should be time-phased and easily measurable. Therefore, they should indicate some sort of acceptance level, for example:

1. To contact and counsel on a regular basis at least fifteen Indian students who are potential dropouts
2. To inform teachers at Chief Joseph High School about the cultural background of Indian students in a series of ten seminars to be held during the 1973-74 school year
3. To decrease the dropout rate of Indian students so that after the 1973-74 school year the dropout rate of Indian students will be no greater than that of white students in the school.

It should be noted that these objectives are both time-phased and quantifiable. They are easily measured and the evaluation is automatic. The easy evaluation of programs developed through use of this model is another argument for its use.

The next phase of the model is the plan of action. At this point it becomes necessary to develop actual operational strategies to plan for implementation of programs which will be designed to meet the objectives identified.

Critical aspects of the model are the identification of responsibilities and the timeline. At this point, specific responsibilities are identified and precise times are indicated for the performance of specific tasks.

Evaluation is continuous and focuses on the time-phased objectives which either have or have not been met.

In much the same manner, we have found that this model can be used as a tool for planning curriculum programs. Instead of creating programs which provide a means of developing plans for social action at the school-community level, students and teachers can work together and utilize the model as a means of planning specific curricular programs. For example, in one of the Indian schools where the SPICE model was utilized, five Indian high school students were charged with the responsibility of conducting a class in Indian myths and politics to be presented to a group of white teachers in the high school. It was necessary for the students to become involved in research, planning, implementation, and evaluation activities dealing with the subject matter which they presented to the teachers.

We feel that the internal power of the SPICE model makes it a significant and viable tool for use in planning curriculum programs for the gifted minority student.

Jackson

Before considering a specific evaluation program, I believe we should turn our attention to a recent valuable contribution made to the field of educational evaluation by Maurice Eash (1971) at the University of Illinois, Chicago Circle. Dr. Eash discussed the concept of differential evaluation as follows:

Special programs present particular evaluation problems inasmuch as they are often innovative and developed within field settings as opposed to a more controlled environment. Neither of these conditions preclude the use of evaluative research, but they set forth methodological problems for program administrators, project evaluators, and granting agencies, which, if not reconciled, are a continuous source of antagonisms which seed conflict and interfere with efficient program functioning.

Programs which are established under the rubric innovation often lack specific definable objectives that are deemed necessary in evaluation research. Thus, if the evaluator or granting agencies insist on ready made specific objectives which serve as the instant source of criterion measurements for the worth of a program, innovation becomes sacrificed to meeting this demand, or a climate of duplicity between program developers and evaluators prevails. Therefore, field programs dubbed innovative must have the option of evolving further objectives and clarifying initial objectives as the crucible of experience sheds light on new educational processes and dispels previous assumptions of the program staff. These more flexible program requirements make demands on evaluators to help clarify objectives stated at the beginning of a project. In this respect, the framework of a field evaluation differs most radically from a laboratory research project with comparatively fixed goals and the researcher's task to prove or disprove previously hypothesized relationships. In most innovative programs the state of knowledge permits some conjectures on relationships; however, the specification of variables and their relationships is usually not possible with any degree of precision. Thus, the program evaluator must recognize these differences, and must use a conceptual scheme to select appropriate evaluative procedures and to guide the collection and analysis of data. As suggested below this means placing the program along a continuum determined largely by the degree of formalized objectives that specify the relationship of variables and the clarity of these relationships, the interaction of theoretical constructs, and operational descriptions. The following table presents a continuum with these three points designated. On the continuum three models are described: the initiatory model, the developmental model, and the integrated model. In the initiatory model the planning of goals, specifications, and operations are the major processes. In the developmental model the actual construction and testing of a program in a field operation are the chief characteristics. In the integrated model the program is clear on its goals, can predict with reasonable accuracy the outcomes, and generates evaluation data for internal adjustments. These are defined in the following table and a sample description is given of a program at each model stage.

Three Levels of Program Models in Special Programs for Gifted and Talented

Initiatory Models	Developmental Models	Integrated Models
Models are vague, intuitive in effects to be achieved. Objectives are stated as general outcomes and social goods to be achieved. There is much concern with theory. The debates on alternatives are theoretical rather than operational or data based. Justification of the program may be drawn from analogous progr grams in other contexts or be based on philosophical assumptions. Details for operationalizing the proposal are sketchy.	Models where a mixture of objectives prevails. Macro objectives give general guidance and some micro-objectives are defined. Objectives still seem to be shifting and the model still takes different forms in individual staff descriptions. There is more concern with operational alternatives than a given alternative. While the program is operating there are many unknowns and frequently considerable improvisations.	Models have specific objectives to be achieved. There is monitoring of procedures for consistency of operation. Relationships of treatment (what is done educationally) are specified, and reproducibility is enhanced by elaborated descriptions of the model in operation. Logical relationships are explicated and empirical data are being collected. The outcomes are being assessed and the range of effects are capable of being attributed to the program development.
Precis of a Program	**Precis of a Program**	**Precis of a Program**
A special program for gifted and talented children is drawn up. Decisions on the form it will take—special classes, enrichment, independent tutorials, or a mix of these—are still open. There is lack of agreement on definition of clients. Who is a gifted or talented student? How should he be educated? Should he be identified? At what grade? By whom? Will there be extra monies allocated to the education of these students? Will there be a need to establish a separate administrative unit for this program? What type of research will be conducted on a program? When will parents be involved? A committee	One special program for gifted and talented children has been underway two years. Fifty children are involved, in some cases teachers nominate students for the program, in others they are selected on basis of test scores. The first year students spend four hours per week in the program; in the second year this has been extended to six. The program has focused on scientific interests though there is concern about including more humanities. One teacher made arrangements for 25 of the students to see the Old Vic perform at the local college. Some data, mostly of a descriptive nature, has been collected on the students, their achievements, and the program. Teachers do not have fixed style for instruction; the	A program for gifted and talented students has been in operation for five years. Open-ended instruction is featured with teachers and students cooperatively planning the curriculum for three months at a time. The Director of Research for the school district monitors the program through teachers' records, student interviews, and regular classroom visitations. Program outcomes are investigated through their effect on students' achievement and interest. A contrast group of students, not in a special program, in a neighboring school district with a similar student body is supplying comparable data on achievement and interest. A further dimension of the

has been set up to resolve some of these issues. Administrative responsibilities and a sum of money for planning have been allocated. The committee has been meeting for one year; a set of minutes, a list of consultants, and a description of the field trips to visit programs for gifted children exists.

instruction reflects personal teaching style.

study supplies data on special programs' influence on the regular program. At the end of the five years a summer workshop composed of teachers and pupils in the program in conjunction with administrators and university consultants will draw up the program description for the next three years. Decisions will be rendered on the program organization, the selection and retention of students, and the research to be conducted.

Turning to a specific plan for evaluation, I would like to share with you some findings of the external evaluation of the Illinois Plan for Program Development for Gifted Children.

When the evaluation was completed in 1971, the state plan had been in operation for eight years, supported by a total of $32,562,000. Of this total, 60% was devoted to grants to local school districts, 19% to demonstration centers, 7% to experimental projects, 6% to state staff and administration, and 8% to personnel training programs.

One of the most revealing comparisons made by the evaluation staff was between (1) average classes, with all levels of ability represented, in areas of above-average socioeconomic status and (2) gifted classes, in schools receiving special state funds at an average of $28 per pupil per year and in schools with demonstration classes receiving special state funds to show their program to visitors. The average and gifted classes differed in the amount of emphasis given to higher level thought processes of application, synthesis, and evaluation. Gifted and average classes also differed markedly in classroom focus and climate. Gifted classes were more likely to emphasize discussion, to display enthusiasm, to be independent, and to place much emphasis on divergent thinking. Average classes were more likely to exhibit test and grade stress, lack of enthusiasm, and less emphasis upon independence.

These results are consistent with the objectives of the state plan and they reflect the teaching skills which were emphasized in the in-service training of teachers supported by the state for some 6,000 teachers in the period 1963-71. We believe our investment in personnel training to be one of the keys to successful operation of the state plan, and would recommend that federal assistance include funds for training (see Jackson and others, 1972).

PART FOUR

CONCLUSION

We would hope that the reader has found the preceding compendium of interest and value. The efforts of the contributors were especially appreciated by the conference staff and the National/State Leadership Training Institute on the Gifted and the Talented.

The problems and controversies surrounding the education of gifted and talented students, and particularly those gifted students from disadvantaged segments of the population, present a true challenge to educators. We believe it is the sharing of ideas and experiences which will most facilitate the solution to these problems and lead to progress in the field. It is therefore our sincere hope that this publication will in some small measure contribute to the solutions and the progress.

PART FIVE

BIBLIOGRAPHY

Editor's Note:

The following represents a collection of references submitted by the contributors. They are here listed in alphabetic order.

Amran, F. M., and Giese, D. R., ***Creativity Training: A Tool for Motivating Disadvantaged Students,*** ED 018 210, 1968.

Anonymous, "Goodbye IQ, Hello EI (Ertl Index)," ***Phi Delta Kappan,*** v. 51, 1972, pp. 89-94.

Bayley, N., "Comparison of Mental and Motor Test Scores for Ages 1-15 Months by Sex, Birth Order, Race, Geographic Location, and Education of Parents," ***Child Development,*** v. 36, 1965, pp. 379-411.

Bennis, G. Warren, ***Changing Organizations,*** New York, McGraw-Hill, 1966.

Benne, K. D., "Authority in Education," ***Harvard Educational Review,*** v. 40, 1970, pp. 385-410.

Bernal, E. M., Jr., ***Assessing Assessment Instruments: A Chicano Perspective,*** February, 1972 (paper prepared for the Regional Training Program to Serve the Bilingual/Bicultural Exceptional Child, Montal Educational Associates, Sacramento, California).

Bloom, B. S., Davis, A., and Hess, R., ***Compensatory Education for Cultural Deprivation,*** New York, Holt, Rinehart and Winston, 1965.

Bond, H. M., "The Productivity of National Merit Scholars by Occupational Class," ***School and Society,*** v. 85, 1957, pp. 267-68.

Bonsall, M., and Stefflre, B., "The Temperament of Gifted Children," ***California Journal of Educational Research,*** v. 6, September, 1955, pp. 162-65.

Brandwein, P. F., ***The Gifted Child as a Future Scientist,*** New York, Harcourt Brace, 1955.

Brickman, L., "Project ABLE: An Experiment in Guidance," ***High Points,*** v. 45, April, 1963, pp. 24-27.

Bruch, C. B., ***The ABDA: Making the Stanford-Binet Culturally Biased for Disadvantaged Black Children,*** University of Georgia, Athens, 1972 (unpublished manuscript).

Bruch, C. B., ***The Creative Binet,*** April, 1968, (paper read at the Council for Exceptional Children conference, New York).

Bruch, C. B., "Modification of Procedures for Identification of the Disadvantaged Gifted," ***Gifted Child Quarterly,*** v. 15, no. 4, 1971, pp. 267-72.

Bruch, C. B., ***A Proposed Rationale for the Identification and Development of the Gifted Disadvantaged,*** University of Georgia, 1969 (mimeographed report).

Casebeer, R., ***Project Prometheus,*** April, 1969 (paper read at the American Personnel and Guidance Association convention, Las Vegas).

Cicirelli, V. G., "Religious Affiliation, Socioeconomic Status, and Creativity," ***Journal of Experimental Education,*** v. 35, 1966, pp. 90-93.

Coleman, J. D., and others, ***Equality of Educational Opportunity,*** Washington, D.C., United States Government Printing Office, 1966.

Commission on Tests, ***Volume One: Righting the Balance,*** and ***Volume Two: Briefs,*** New York, College Entrance Examination Board, 1970.

Demaris, R. W., "Planning Occupational Experiences for Culturally Disadvantaged Gifted Children," ***Gifted Child Quarterly,*** v. 11, 1967, pp. 79-85.

Dentler, R. A., and Mackler, B., "Originality: Some Social and Personal Determinants," ***Behavioral Science,*** v. 9, 1964, pp. 1-7.

Douglas, J. H., ***Strategies for Maximizing the Development of Talent Among the Urban Disadvantaged,*** April, 1969, (paper presented at the annual meeting of the Council for Exceptional Children, Denver, Colorado).

Dwyer, R., and Elligett, J., ***Teaching Children Through Natural Mathematics,*** New York, Parker, 1970.

Eash, M. J., ***Issues in Evaluation and Accountability in Special Programs for Gifted and Talented Children,*** Chicago, University of Illinois at Chicago Circle, 1971 (mimeographed report).

Eliot, T. S., "The Family Reunion," in ***The Complete Poems and Plays: 1909-1950,*** New York, Harcourt Brace, 1952.

Fader, D., ***The Naked Children,*** New York, Bantam Books, 1972.

Feldenkrais, M., ***Awareness Through Movement,*** New York, Harper and Row, 1972.

Frierson, E., "Upper and Lower Status Children: A Study of Differences," ***Exceptional Children,*** v. 32, October, 1965, pp. 83-90.

Gallagher, J., ***Analysis of Research on the Education of Gifted Children,*** Springfield, Illinois, Office of the Superintendent of Public Instruction, State of Illinois, 1960.

Gallagher, J., "The Disadvantaged Gifted Child" in Tannenbaum, A. J. (Ed.), ***Special Education and Programs for Disadvantaged Children and Youth,*** Washington, National Education Association and the Council for Exceptional Children, 1968.

Gallagher, J. (Ed.), ***Teaching Gifted Students,*** Boston, Allyn and Bacon, 1965.

Gallagher, J., and Rogge, W., "The Gifted," ***Review of Educational Research,*** v. 36, February, 1966, pp. 37-55

Glasser, W., ***Schools Without Failure,*** New York, Harper and Row, 1969.

Gowan, J. C., "Alienation," ***California Personnel & Guidance Association Journal,*** v. 1, 1968b, p. 407.

Gowan, J. C., "Issues in the Education of Disadvantaged Gifted Children," ***Gifted Child Quarterly,*** v. 12, Summer, 1968a, pp. 115-19.

Gowan, J. C., "Issues in the Guidance of Gifted and Creative Children," ***Gifted Child Quarterly,*** v. 11, Spring, 1967, pp. 14-43.

Gowan, J. C., and Demos, G. D., ***The Education and Guidance of the Ablest,*** Springfield, Illinois, Thomas, 1964.

Gowan, J. C., and Demos, G. D. (Eds.), ***The Disadvantaged and Potential Dropout: Compensatory Educational Programs,*** Springfield, Illinois, Thomas, 1966.

Gowan, J. C., and Demos, G. D., and Torrance, E. P., ***Creativity: Its Educational Implications,*** New York, John Wiley, 1967.

Gowan, J. C., and Bruch, C. B., "What Makes a Creative Person a Creative Teacher?" ***Gifted Child Quarterly,*** v. 11, 1967, pp. 157-59.

Grant, T. E., and Renzulli, J. D., ***Subcultural Indices of Academic Potential,*** Storrs, Connecticut, University of Connecticut, 1971.

Gregory, C. E., ***The Management of Intelligence,*** New York, McGraw-Hill, 1967.

Guilford, J. P., "Intellect and the Gifted," ***Gifted Child Quarterly,*** v. 16, 1972, pp. 175-84.

Guilford, J. P., ***Intelligence, Creativity, and Their Educational Implications,*** Great Britain, Robert R. Knapp, 1968.

Guilford, J. P., ***The Nature of Human Intelligence,*** New York, McGraw-Hill, 1967.

Guilford, J. P., "The Structure of Intellect," ***Psychology Bulletin,*** v. 53, 1956, pp. 267-93.

Havighurst, R. J., "Conditions Productive to Superior Children," ***Teachers College Record,*** v. 62, 1961, pp. 524-31.

High, P. B., "Educating the Superior Student in the Deprived Area School," ***The American Teacher Magazine,*** v. 48, December, 1963, p. 506.

Hillson, H. Y., and Myers, F., ***The Demonstration Guidance Project, 1957-62,*** New York, Board of Education, 1963.

Holt, J., ***How Children Fail,*** New York, Dell, 1966.

Horner, M., "Fail: Bright Women," ***Psychology Today,*** v. 3, November, 1969, pp. 36-38, 62.

Hunt, J. McV., ***Intelligence and Experience,*** New York, Ronald Press, 1961.

Hunt, J. McV., "The Psychological Basis for Using Pre-School Enrichment as an Antidote for Cultural Deprivation," ***Merrill-Palmer Quarterly,*** v. 10, July, 1964, p. 212.

Institute for Behavioral Research in Creativity, ***Alpha Biographical Inventory,*** Greensboro, North Carolina, Prediction Press, 1963.

Jackson, D. M., and others, "Illinois Evaluates its Special Program for the Gifted," in United States Commissioner of Education, ***Education of the Gifted and Talented, Report to the Congress of the United States,*** Washington, D.C., United States Office of Education, 1972, pp. 256-87.

Jenkins, M. D., "The Upper Limit of Ability Among American Negroes," ***Scientific Monthly,*** v. 66, 1948, pp. 339-401.

Karnes, M. B., and others, ***Culturally Disadvantaged Children of Higher Potential: Intellectual Functioning and Educational Implications,*** Champaign, Illinois, Community Unit 4 School District, 1965.

Kozol, J., ***Death at an Early Age,*** Boston, Houghton-Mifflin, 1967.

Krathwohl, D. R., Bloom, B. S., and Masia, B. B., ***Taxonomy of Educational Objectives. Handbook II: Affective Domain,*** New York, David McKay, 1964.

Lloyd, J., "Developing Creativity with the Culturally Deprived," ***Instructor,*** v. 75, February, 1966, p. 27.

Magary, J. R., and Freehill, M. F., "Critical Questions and Answers Relating to School and Society in the Education of the Gifted," ***Gifted Child Quarterly,*** v. 16, 1972, pp. 185-94.

Martinson, R. A., ***Curriculum Enrichment for the Gifted in the Primary Grades,*** Englewood Cliffs, New Jersey, Prentice-Hall, 1968.

Mathis, H. I., "The Disadvantaged and the Aptitude Barrier," ***Personnel and Guidance Journal,*** v. 47, 1969, pp. 467-72.

McCabe, A. R., ***Progress Report: The Intellectually Superior Child in a Deprived Social Area,*** New York, East Harlem Demonstration Center, 1965.

McClelland, C. D., and others, ***Talent and Society,*** Princeton, New Jersey, Van Nostrand, 1968.

Meeker, M., ***The Structure of Intellect: Its Use and Interpretation,*** Columbus, Ohio, Charles Merrill, 1969.

Mercer, J. R., ***Pluralistic Diagnosis in the Evaluation of Black and Chicano Children: A Procedure for Taking Sociocultural Variables into Account in Clinical Assessment,*** Washington, D.C., September, 1971, (paper presented at the annual meeting of the American Psychological Association).

Miller, T. M., "A Search for Talent in Economically Distressed Areas," ***Gifted Child Quarterly,*** v. 8, 1964, pp. 179-80.

Miner, J. B., ***Intelligence in the United States,*** New York, Springer, 1957.

Niles, C. C., "Gifted Children" in L. Carmichael (Ed.), ***Manual of Child Psychology,*** New York, John Wiley, 1954.

Parnes, S. J., and Harding H. F. (Eds.), ***A Source Book for Creative Thinking,*** New York, Scribner's, 1962.

Passow, A. H., ***The Gifted and the Disadvantaged: Some Curriculum Insights,*** 1965, (Paper prepared for a conference at Teachers College, Columbia University, New York).

Passow, A. H., "The Talented Among the Disadvantaged," ***Accent on Talent,*** v. 1, 1966, pp. 3-7.

Passow, A. H., Goldberg, M., and Tannenbaum, A. J., ***Education of the Disadvantaged,*** New York, Holt, Rinehart, and Winston, 1967.

Ramirez, M., "Current Educational Research: The Basis for a New Philosophy for Educating Mexican Americans," in M. R. Mazon (Ed.), ***Adelante: An Emerging Design for Mexican American Education,*** Austin, Texas, Center for Communication Research, University of Texas at Austin, 1972.

Renzulli, S. J., and Ward, S. V., ***Diagnostic and Evaluative Scales for Differential Education for the Gifted,*** Storrs: University of Connecticut, 1969.

Reissman, F., ***The Culturally Deprived Child,*** New York, Harper-Row, 1962.

Rogers, D. A., "Visual Expression: A Creative Advantage of the Disadvantaged," ***Gifted Child Quarterly,*** v. 12, 1968, pp. 110-14.

Sexton, P. C., ***Education and Income,*** New York, Viking Press, 1961.

Shaw, M., and McCune, J., "The Onset of Underachievement in Bright Childrcn," ***Journal of Educational Psychology,*** v. 51, 1960, pp. 103-08.

Sheldon, W. T., ***Varieties of Delinquent Youth,*** New York, Harper, 1949.

Silberman, C. E., ***A Crisis in the Classroom: The Remaking of American Education,*** New York, Random House, 1970.

Smith, R. M., ***The Relationship of Creativity to Social Class,*** Pittsburg, University of Pittsburg, School of Education, 1965, (mimeographed report).

Solomon, L., and Berzon, B., ***New Perspectives on Encounter Groups,*** New York, Jossey-Bass, 1972.

Stallings, C., ***Gifted Disadvantaged Children,*** Storrs, Connecticut, The University of Connecticut, Technical Paper, 1972.

Taba, H., and Elkin, D., ***Teaching Strategies for the Culturally Disadvantaged,*** Chicago, Rand McNally, 1966.

Tannenbaum, A. J. (Ed.), ***Special Education and Programs for Disadvantaged Children and Youth,*** Washington, National Education Association and the Council for Exceptional Children, 1968.

Taylor, C. W., "Be Talent Developers . . . As Well As Knowledge Dispensers," ***Today's Education,*** v. 57, pp. 67-69.

Terman, L. M., and others, ***Genetic Studies of Genius,*** Stanford, California, Stanford University Press, 1925-1959.

Tisdall, W. J., ***The Lincoln School for Disadvantaged Able Students,*** New York, April, 1968 (paper prepared for the Council for Exceptional Children convention).

Torrance, E. P., "Are the Torrance Tests of Creative Thinking Biased Against or in Favor of 'Disadvantaged' Groups?" ***Gifted Child Quarterly,*** v. 15, 1971, pp. 75-80.

Torrance, E. P., ***Education and the Creative Potential,*** Minneapolis, University of Minnesota Press, 1964a.

Torrance, E. P., "Finding Hidden Talents Among Disadvantaged Children," ***Gifted Child Quarterly,*** v. 12, 1968, pp. 131-37.

Torrance, E. P., ***Guiding Creative Talent,*** Englewood Cliffs, New Jersey, Prentice Hall, 1962.

Torrance, E. P., ***How Creativity Development Can Awaken Unrecognized Potential,*** Minneapolis, April, 1969a (paper presented at the conference on "Developing Unwakened and Unrecognized Potential" sponsored by the Minnesota State Department of Education).

Torrance, E. P., "Identifying the Creatively Gifted Among Economically and Culturally Disadvantaged Students," ***Gifted Child Quarterly,*** v. 8, 1964b, pp. 171-76.

Torrance, E. P., "Issues in the Identification and Encouragement of Gifted Disadvantaged Children," ***The Association for the Gifted Newsletter,*** Washington, D.C., Council for Exceptional Children, 1969b.

Torrance, E. P., "Motivating the Creatively Gifted Among Disadvantaged Children," ***Gifted Child Quarterly,*** v. 7, 1965, pp. 7-13.

Torrance, E. P., ***Rewarding Creative Behavior,*** Englewood Cliffs, New Jersey, Prentice-Hall, 1964c.

Torrance, E. P., ***The Torrance Tests of Creative Thinking,*** Princeton, New Jersey, Personal Press, 1966.

Torrance, E. P., ***Understanding the Fourth Grade Slump in Creativity,*** Athens, Georgia Studies of Creative Behavior, 1967.

Torrance, E. P., and Khatena, J., "What Kind of Person Are You?: A Brief Screening Device for Identifying Creatively Gifted Adolescents and Adults," ***Gifted Child Quarterly,*** Summer, 1970, pp. 71-75.

Toynbee, A., "Is America Neglecting Her Creative Minorities?," in C. W. Taylor (Ed.), ***Widening Horizons of Creativity,*** New York, John Wiley, 1964.

United States Commissioner of Education, ***Education of the Gifted and Talented, Report to the Congress of the United States,*** Washington, D.C., United States Office of Education, 1972.

Van Schlutter, C. E., "Exceptional Kentucky Youth Learns in Residence," ***National Vocational Guidance Association Gifted Student Interest Committee Newsletter,*** v. 9, May, 1969, p. 2.

Ward, S. V., ***Educating the Gifted,*** New York, Merrill, 1961.

Williams, R. L., and Byars, H., "Negro Self-Esteem in a Transitional Society," ***Personnel and Guidance Journal,*** v. 47, 1968, pp. 120-25.

Witty, P., and Jenkins, M. D., "The Educational Achievement of a Group of Gifted Negro Children," ***Journal of Educational Psychology,*** v. 45, 1934, pp. 585-97.

Wolfe, D., ***The Discovery of Talent,*** Cambridge, Massachusetts, Harvard University Press, 1969.

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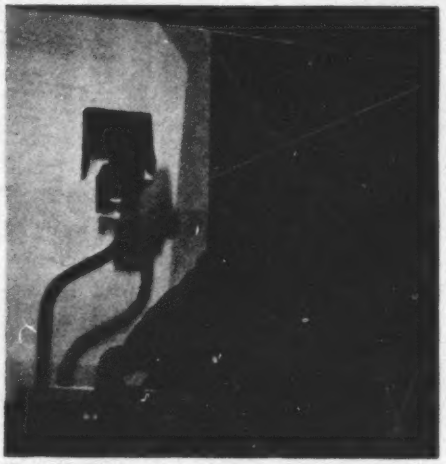

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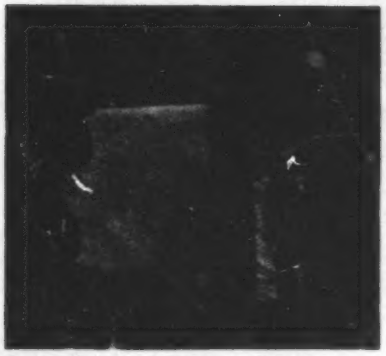

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Title VI of the Civil Rights Act of 1964 states:

"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, or denied the benefit of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

Therefore, EPDA programs must be operated in compliance with this law.